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DUTHOIT & Co., Patent Portable Umbrella and Tent Manufacturers, 6 Finsbury-place, South.

DYMOND, H., & Co., Wholesale Boot and Shoe Manufacturer, and Dealers in Gutta Percha Goods, 1, Regent-street, City-road.

EARNSHAW, T., Watch, Clock, and Chronometer Manufacturer to the Admiralty, 119, High Holborn.

EDWARDS, J., Gas Apparatus Manufacturer and Fitter, 39 A., Ray-street, Clerkenwell.

EDWARDS, D. & H. & Co., Wholesale, Retail, and for Exportation—Patentees of the Preserved Potato, an invaluable sea store, adopted generally in the Royal Navy, by her Majesty's commissioners for emigration, the honourable E.I.C., and for shipping in general; and for its economy and facility in cooking, recommended for domestic use—supplied by all provision merchants in the United Kingdom, Colonies, &c.—1, Bishopsgate-street.

EGLESE, J., Watch Maker and Goldsmith for Home and Exportation, 30, Cornhill.

ELLIS, T., Carriage and Harness Maker for Exportation to extreme climates, 60, High-street, Whitechapel.

ELSTON & SONS, R., Watch Dial Manufacturers, 24, Myddleton-street, Clerkenwell.

ENNEVER & STEEDMAN, Pianoforte Manufacturers, with Metallic Plate, and all the last Improvements, 3, Little Crescent-street, Euston-square.

ENDERBY, C. H. & G., Merchants, 13, Great St. Helens.

EPITHEM COMPANY, Sole Manufacturers of Markwick's Patent Spongio Piline (for Poultices), Impermeable Piline (for Rheumatism), Respirators, Chest Protectors, Shoe Socks, Lumbago Bands, Horse-foot Pads, the Indian Sponging Towels and Belts, &c., 32, King William-street, City.

ERSWELL, H., Carriage and Harness Manufacturer, 24, Little Moorfields (established 1730).

EVANS, J., Boot Tree and Last Manufacturer, 18, Old Compton-street, Soho.

EVANS, J., & SON, Engine, Lathe, and Tool Manufacturers, and General Machinists; Contractors to her Majesty's Honourable Board of Ordnance, and Patent Axletree Manufacturers, by appointment to her Majesty and the Royal Family; all kinds of Machinery supplied on liberal terms to merchants and captains for Exportation; 104, Wardour-street, Soho.

EVERETT, J., Woolstapler, Upper Russell-street, Bermondsey, and Norwich.

Fairchild, J., & Co., Pianoforte Manufacturers (for extreme climates), 200, High Holborn.

Farebrother, Clark, & Lye, Auctioneers, Surveyors, and Estate Agents, 6, Lancaster-place, Strand.

Fauntleroy, G., Worsted and Yarn Spinner and Dyer, 13, Ropemaker-street, Finsbury.

Felgate, W., & Co., Ship and Insurance Agents, 4, Clements-lane.

Ferrar, B., Wholesale and Export Manufacturer of Barometers, Looking Glasses, Picture Frames, and Fancy Cabinet Goods, 48, Compton-street, Clerkenwell.

Field, Henry, Rick Cloth, Tarpaulin, and General Waterproof Manufacturer, 8, Elizabeth-place, Walworth, near Surrey-square.

Fisher, N., & Sons, Leather Merchants, Curriers, and Dealers in Sponge, 5, Maize-pond, Southwark.

Fitch, J. R., Wholesale Jeweller and Birmingham Agent, every description of Gas Chandeliers and Fittings, 51, Hatton-garden.

Fontaine, W., Tallow Chandler, Soap Maker, and Oilman, East-street, Hoxton.

Forster & Smith, Merchants, New City Chambers, Bishopsgate-street.

Fraser, J., Wholesale and Export Boot and Shoe Manufacturer, 172, Saint George-street.

French, J., & Sons, Wholesale Manufacturing Goldsmiths and Jewellers, 5, Newcastle-place, Clerkenwell-close.

Freeman, Builder and Architect, New Walk, Shad Thames.

Frost, J., Copper and Brass Founder, 8, Allen-street, Goswell-street.

Frost, J., Brass Founder and General Caster for Gas Fitters, Engineers, and Ship Builders, 17, Half Moon-street, Bishopsgate-street.

Frost, Noakes, & Vincent, (Originally, James Frost,) Brass and Cock Founders, Pump Makers, &c., 195, Brick-lane, Whitechapel, London.

Fudge, C., Manufacturing Goldsmith, 45, Seckford-street.

Furth, Daniel, Merchant, 29, Nicholas-lane.

Gaffin, T., Carrara Marble Works, choice designs of Monuments, Tablets, and every description of Marble, Stone, and Scagliola Work, 63, Quadrant, Regent-street.

Gally, P. & P., & Co., Opticians and Looking-Glass Manufacturers, 68, Hatton-garden.

Gamble & Davis, Wholesale and Export Shoe Manufacturers, 45, Fish-street-hill.

Gardner, J., Bird Stuffer to the Royal Family and various Museums, 426, Oxford-street.

Gass, S. H. & D., Manufacturing Silversmiths and Jewellers, 166, Regent-street.

Gatenby & Co., Haircutters and Ornamental Hair Manufacturers, Wholesale Perfumers, and Practical Chemists, 9, Charing-cross.

Gates, J., Gold and Silver Leaf, and Gold Beaters' Skin Manufacturer, 24, Vine-street, Hatton Garden.

Gebhard, Rottman, & Co., Agents to Foreign Manufacturers, 83, Hatton-garden.

Gibbons, Abel, Feather Bed, Mattrass and Palliasse Manufacturer—the Trade supplied with every description of Purified Bed Feathers, Wool, Hair, and Flock, at the lowest prices—13, Leman-street, Whitechapel.

Gilbert, J. A., & Co., Grocers' Canister and Fancy Tea-Box Manufacturers, and General Japanners, 13, Dorrington-street, Clerkenwell.

Goddard, T., General Agent & Outfitter, 146, Cheapside.

Goode & Boland, Gold and Silver Chain Manufacturers, 59, Hatton-garden, and Birmingham.

Gowland, J., Inventor, Patentee, and Manufacturer of the Concentric Spring Impulse Escapement Chronometers, Watches, and Clocks, Leathersellers'-buildings, and 52, London-wall.

Goy, Evans, & Co., General Outfitters, 175, Piccadilly, and 24 and 25, Cornhill.

Graham, J., Woollen Draper, Shirt Maker, Hosier, and Outfitter, 179, High-street, Edinburgh.

Gray, R., (from Collards,) Patent Pianoforte Manufacturer, with Metallic Plate, (for extreme climates,) 39, Edward-street, Hampstead-road.

Gray, T. W., Hydraulic Engineer, Brass and Iron Founder, Brazier, Plumber, &c., 79, King William-street.

Green, J., celebrated Haircutter and Natural Wig Maker, 68, Cheapside.

Greenhill, C., Morocco-Case and Watch Material Manufacturer, 12, Gt. Sutton-street, Clerkenwell.

Greenwood, T., Church, Turrett, House, and Musical Clock Manufacturer, 5, St. James's-walk, Clerkenwell.

Grimoldi & Stoppani, Barometer, Thermometer, and Sympicsometer Manufacturers, 31, Brook-street, Holborn.

Grover, J., Army Contractor, High-street, Chatham.

Gugeri, A., Barometer, Thermometer, and Looking-Glass Manufacturer, 16, Charles-street, Hatton-garden.

Gull, J. W., Ship and Insurance Broker, 4, Brabant-court, Philpot-lane.

Hall, Brothers, Merchants, Shipowners, and Brokers, 2, Riches-court, Lime-street.

Hall & Co., Patentees of the Leather Cloth, or Pannus Corium Boots and Shoes, peculiarly soft and easy for tender feet, Wellington-street, Strand, leading to Waterloo-bridge.

Halloran, Mr., Collegiate School, Tavistock-rd., Plymouth.

Hampden & Co., General Commission and British and Foreign Patent Agents, &c., 448, West-street, London.

Hancock, H., Shipping Butcher—N.B. Shipping supplied with Live Stock, Compressed Hay, &c.—79, Minories.

Hardwidge, J., Needlemaker, 172, Long-lane, Bermondsey.

Harris, R., & Co., Furniture and Bedding Manufacturers, 124 and 125, High Holborn.

Hart, J. T., Coach, Harness, and Engine-hose Currier, 16, Union-street East, Spitalfields.

Hartill & Lockington (from Broadwood's), Pianoforte Makers, with Metallic Plates for extreme climates, 41, Kenton-street, Brunswick-square.

Hartree, W. T., Export Cooper, &c., 7, Charlotte-row, Bermondsey.

Hartshorne, G., jun., Iron Merchant and Manufacturer of Chain Cables, Anchors, &c., 12, Little Tower-street, London, and Stourbridge, Worcestershire.

Hawkins, J., Engineer and Smith in general, Hatfield-street, Stamford-street.

Hayes, J., Surgeon-Dentist and Cupper, 42, St. Martin's-lane, Charing-cross.

Hearn, J., Refiner and Dealer in Gold and Silver Ores and Metals, 11, Jerusalem-passage, Clerkenwell.

Hemsley & Co., Sextant (wholesale and export), Quadrant, Telescope, Barometer, Thermometer, Drawing Instruments, and Compass Manufacturers, 140, St. George-Street, late Ratcliffe-highway.

Henneway, W., Merchant, Exeter.

Heptinstall, W., Gun Manufacturer to the Hon. Board of Ordnance and the Hon. East India Company, 18, Swan-street, Minories.

Hewitt, J., Wholesale Watch Glass Manufacturer, Ballymacarrett, Belfast.

Hewlett, A. H., Manufacturer of genuine Liquid Hair Dye free from Smell, and skin, gauze, and transparent Partings for Wigs, Fronts, Scalps, &c., 5, Burlington Arcade, Piccadilly.

Hill, J., Manufacturing Goldsmith and Gold Chain Maker, 6, St. James's-walk, Clerkenwell.

Hill & Stone, Coach Builders and Harness Makers, 20 and 21, Little Moorfields, and 49, London Wall.

Holdernesse and Holdernesse, Pianoforte Manufacturers (for extreme climates), 444, New Oxford-st., Bloomsbury

Hollands, D. F., Jun., Wharfinger and Coal Merchant, Bermondsey-wall.

Hollis, G., Pewterer and Manufacturer of Worms, Stills, Refrigerators, Soda Water and Beer Machines, Pots, &c., 27, Crown-street, Finsbury-square.

Hoole, W., Steel, Metal, File, and Tool Merchant, (Sheet-Steel for Engraving Plates,) Rolled Brass and German Silver—Brass, German Silver, and Tin Tubes—Brass and German Silver Castings, Melting Pots, Clock Materials, &c., 21, St. James's-walk, Clerkenwell.

Horne, R., Paper Hanging Manufacturer, House Painter and Decorator—Export Orders promptly executed—41, Gracechurch-street.

Horsley, J. T., (late R. Richards & Son), Wholesale and Export Ironmonger—bar, hoop, rod, and sheet iron—95, New Park-street, Borough.

Hotchkin and Hobbs, Ship and Insurance Agents, 3, East India Chambers, Leadenhall-street.

Houfe, Draper, Knaresborough.

Hovenden, R., Wholesale Perfumer, 57 and 58, Crown-street, Finsbury.

Howarth, H., Chemical Works, near Accrington.

Hoy, J., & Co., Wine and Spirit Merchants, 6, Store-lane, Belfast.

Humphreys, J., Furniture Japanner, 40, Seward-street, Goswell-street.

Hunt, E., Wholesale and Retail Watch Material, Tool, and Movement Dealer, 21, Ironmonger-street, St. Luke's.

HUNT, G. A., Feather Bed and Mattrass Manufacturer, 1, Weston-place, King's-cross (Established 1826).

HUNTER, J., Merchant, 110, Fenchurch-street.

HYAM, L., & Co., Merchant Tailors, Clothiers, and Outfitters, 36, Gracechurch-street, and 86, Oxford-street.

HYDROMAGEN INDIA RUBBER WATER PROOF CLOTHING COMPANY'S Zephyr, Silk, & Alpaca Ante-Shower Coats, for Tropical Climates—Manufactory, 18, Houndsditch.

INGRAM, J. Export Upholsterer, 29, City-road.

JACKSON, W. G., Distillery, Dockhead, Bermondsey.

JACOBS & SON, Plain and Cut Glass Manufacturers, Wholesale and for Exportation, 64, Crown-street, Finsbury.

JACOBS & TOWERS, Carvers, Gilders, & Wholesale Looking Glass Manufacturers, 56, Mansell-st. Goodman's fields.

JAMRACK, J. C., Naturalist, Fixed Agent to the Zoological Society at Amsterdam, 164, Ratcliff-highway.

JEFFERY, W., Export Boot Maker, 76, Bunhill-row, St. Luke's.

JEFFRY, R., Wine Cooper and Dealer in Bottles, 6, Great St. Helens.

JENKINS, A., Carver, Gilder, Wholesale and Export Looking Glass and Picture Frame Manufacturer, 46, Goswell-street.

JENKINS & PYKE, Importers and Dealers in Sponge and Segars, 114, Minories.

JENKINSON, W., Saddler, Home & Export Harness and Saddle Manufacturer, 44, London Wall, City.

JERRAM, G. T., Soap Manufacturer, General Perfumery and Fancy Brush Warehouse, 69, Hatton-garden.

JOHNSON, H., Builder and Contractor, 46, Hatton-garden.

JONES, H., Gas Meter Manufacturer, 44, Old-street, St. Luke's.

JONES, G., Diamond Worker and Jeweller, 20, Baker-street, Bagnigge Wells-road, Clerkenwell.

KAIN, J. J., Chemist and Druggist, Medicine Chests fitted for all Climates on the most reasonable terms, 9, Parker's-row, Bermondsey, opposite the Catholic Chapel.

KAY, J., Broker, 150, Fenchurch-street.

KELSEY, J., Builder, Contractor, Bricklayer, & Mason, Paradise-row, Rotherhithe.

KENNARD, A. W., Cork Manufacturer for Exportation, 117, Minories.

KENYON, T., Chemical Works, Newton Bank.

KENYON, T. & Co., Manufacturing Chemists, Newton Bank; Chemical Works, Miles Platting, near Manchester.

KIDSTON, W. & Co., Medical and General Shop Fixture and Glass Manufacturers, 18, Bishopsgate-st. Without.

KUMPF & ECKENSTEIN, General Merchants, 12, Mark-lane.

LAMB, J., Wholesale Looking-Glass Manufacturer for Home and Exportation, 59, Curtain-road, Shoreditch.

LANKSHEAR, T., Pocket Book Manufacturer, 18, Seckford-street, Clerkenwell.

LANSDELL, T., Tailor, Clothier, and, Outfitter, 327, High Holborn.

LATHAM, J., Wholesale and Export Pianoforte Manufacturer, 28, Howland-street, Fitzroy-square.

LAUGHTON, J., Wholesale Export Boot and Shoe Manfr. and Warehouseman, 46, Mansell-street, Goodman's-fields.

LAYTON, E., Patent Pianoforte Manufacturer, 121, St. John-street, Clerkenwell, and 18, Goulden-terrace, Islington.

LEE, T., Merchant and Manufacturer, 5, George-yard, Lombard-street, London, and Birmingham.

LEES & BARNES, Brass and Iron Founders, and Manufacturers of all descriptions of Power Looms, and Machinery in general, Soho Iron Works, Greenacres-moor, near Manchester.

LEFEBURE, T. P., Patentee of Boots and Shoes made by Steam, brass screws being used instead of stitches, 27, Cranbourn-street, Corner of St. Martin's-lane.

LESSWARE, H., Coppersmith, Brazier, and Worm Maker, 24, Great Alie-street, Whitechapel.

LEVESQUE, EDMEADES, & Co., Patent Pianoforte Makers, 40, Cheapside.

LEVICK, (Brothers), Merchants, 9, King's Arms-yard, Coleman-street.

LEVY, A., Merchant and Warehouseman, 102, Minories, and George-street, Sydney, New South Wales.

LEVY, B., Cosmocapelion Clothing Establishment, Tailor, Woollendraper, and Outfitter, 324 & 325, High Holborn.

LEWIS, D., Grocers' Tea Canister and Fancy Tea Box and Vase Manufacturer, and General Indian Japanner, 11, Coppice Row, Clerkenwell.

LINGS, W., Surgeons' Instrument, and Truss Maker to the various Hospitals and Dispensaries, 1, Jewin-street, Aldersgate-street. (Established 1826.)

LOADER, J., Export Upholsterer, 23, Pavement, Finsbury.

LOCKYER, J., Metal, Steel, Wire, and Tool Warehouse, 23, St. John's-square, Clerkenwell.

LORD, BROTHERS, General Machine Makers and Cotton Spinners, Canal-street Works, Todmorden.

LOUGH, LEWIS & Co., Gum, Drug, Drysaltery, and Colonial Merchants, 20A, Great St. Helen's.

MACKIE, J. V., Rusk and Biscuit Manufacturer to the Queen, 108, Princes-street, Edinburgh.

MACKIE, R., Patent Pianoforte Manufacturer (for extreme Climates), 9, Store-street, Bedford-square; Manufactory, Tottenham-street.

MAGNUS, N., Wholesale and Export Boot, Shoe, and Leather Manufacturer, 13, Fore-street, Cripplegate.

MANDER, C., Electro-Plater & Gilder, 14, Queen-street, Clerkenwell.

MARR, W., Electro-Plater, 6, Albemarle-street, Clerkenwell.

MARSHALL & EDRIDGE, Ship and Insurance Brokers, 34, Fenchurch-street.

MARSHALL, M., Lighterman, 5, Mill Pond-row, Bermondsey.

MARTEN, W., Wholesale Watch Manufacturer (for all Climates), successor to Cragg Smith and Charles Smith, and established upwards of 150 years, 20, Bunhill-row.

MARTIN, E., Boot, Shoe, and Golosh Maker, Wholesale, Retail, and for Exportation, 3, Church-st., Rotherhithe.

MAUDSLAY, SONS, & FIELD, Engineers, Lambeth-road.

MAUGHFLING, J. S., Shipping Butcher, 14, New-road, St. George's-in-the-East.

MAYES, J., Clock Manufacturer and Dealer in Clock Tools and Materials, 19, St. John's-square, Clerkenwell.

MEDHURST, T., Manufacturer of Patent Weighing Machines, Scales and Weights, Ironfounder, and Engineer, 465, New Oxford-street.

MERRICK, R., Dressing and Jewellery Case, Writing and Travelling Desk Manufacturer, 57, Red Lion-street, Clerkenwell.

MIDDLEMASS, J., Home and Foreign Outfitter—sends Lists with Prices, free on application, 18, South Bridge, Edinburgh.

MILLARD, J., & SONS, Spectacle Makers and Opticians, 24, Coppice-row, Clerkenwell.

MILLIKIN, J., Manufacturer of Surgical Instruments to the Royal Navy and the King's College—every description of Bandage, Elastic Lacing Stockings, Knee Caps, Trusses, Crutches, &c., &c.—161A, Strand.

MILLS, J., Grand Pianoforte Manufacturer, 35, Cardington-street, Hampstead-road.

MITCHELL, J., Steel Pen Manufacturer, 11, Queen-st., City.

MOORE, J., & SONS, Church, Turret, and House Clock Manufacturers, 38 and 39, Clerkenwell-close.

MORGAN, T., Wholesale Export and Furnishing Ironmonger, 11, Pancras-lane, City.

MOSES, H. E. & M., Wholesale and Export Merchants, and Clothing Manufacturers, and Agents for the sale of Colonial Produce, 87, Tower-hill, City.

MOSES, SON, & DAVIS, Merchants, Wholesale Clothiers, General Exporters, & Agents for the Sale of Colonial Produce, 14 & 15, Aldgate High-street.

MOSELEY, J. & SON, Real Manufacturers of Mechanical Tools and Implements of every description of the best quality, suitable for any of the Colonies, 17 & 18, Newstreet, Covent Garden

MOSS, B., & Co., East London Plate and Sheet-Glass Company, Wholesale Manufacturers and Exporters of Looking-Glasses, 45, Leman-street, Goodman's-fields.

MURCOTT, — Gun, Pistol, Rifle, and Air-gun Manufacturer, 503, New Oxford-street.

NANNETTI, G., Statuary, and Artificial Stone Manufacturer and Moulder, 6, Great Brunswick-street, Dublin; and 18, York-street, Belfast.

NEAL, T., Steel Corn and Coffee Mill Maker, 45, St. John-street, Smithfield.

NEGRETTI, H. Manufacturer of Glass Chemical Apparatus, 11, Hatton-garden.

NEWTON, J., & SON, Wholesale and Export Cork Manufacturers, 50 and 51, St. John-street, Smithfield.

NEWTON, J. & G., Wholesale and Export Manufacturers of Enamelled Moleskin and Waterproof Coating, Grove-street, Walworth-common.

NORTON, J., Ornamental Tea Canister, Box, Bowl, and Vase Manufacturer, 25, Vine-street, Hatton-wall.

NOSOTTI, C. A., Looking Glass Manufacturer and Interior Decorator, 388, Oxford-street.

NOTLEY, H., Brush Manufacturer, 12, St. John's-lane, Clerkenwell.

Nowell, W. H., Wholesale and Export Brush and Painting-Brush Manufacturer, 7, Brick-lane, Whitechapel.

Nicoll, G., Court Hair Dresser and Wig Maker, 2, Ryder's-court, Leicester-square.

Oetzmann & Plumb, Patent Pianoforte Manufacturers, with Metallic Wrest Plank, and other improvements, for extreme Climates, 56, Great Russell-street, Bloomsbury, and Chenies-street, Bedford-square.

Oliver, A., Watch Motion Maker, 11, Ironmonger-street, St. Luke's.

Oliver & Edwards, Watch Case Manufacturers, 19, Galway-street, St. Luke's.

Orchard & Co., Marquee, Tent, Rick-cloth, and Tarpaulin Manufactrs., &c., 5, West Smithfield, King-st., Snow-hill.

Osborn, Mr., Albion-school, York.

Overall, S., Fish Factor, &c., 102, Lower Thames-street.

Owen, J., Wholesale and Export Trunk, Chest, Box, and Packing Case Manufacturer, 38, Minories.

Owst & Co., Wood-hoop Merchants and Coopers, near Mill-stairs, Bermondsey.

Paget, R. G., Marquee and Tent Manufacturer, 40, West Smithfield.

Parker, Field, & Sons, Gun Makers to the Board of Ordnance, the East India, and Hudson's Bay Companies, 233, High Holborn.

Parker, R., Railway Contractor, Newchurch.

Parkinson & Frodsham, Chronometer and Watch Makers, Exchange-alley, Cornhill.

Parnell & Banner, Ship and Insurance Brokers, 57, Gracechurch-street.

Pasmore, J., Draper, &c., Exeter.

Pastorelli & Co., Wholesale and Export Opticians, 4, Cross-street, Hatton-garden.

Pears, A. & F., Soap Refiners, Inventors of the Transparent Soap, Manufacturing and Export Perfumers, 91, Great Russell-street, Bloomsbury.

Pepper, E., Dining, Luncheon, Supper Rooms, Wine and Spirit Establishment, &c., 46, Threadneedle-st., opposite Merchant Tailors' Hall.

Phillips, L., Army and Navy Clothier, Hat, Cap, and Accoutrement Maker, Sword Cutler, Outfitter, Camp and Cabin Furniture Manufacturer, 28, Straud.

Phillips, O., & Co., Colonial Brokers, 91, Great Tower-st.

Phillips, W., Electro-Plater and Gilder, 17, Clerkenwell-green.

Phillipps & Graves, Lightermen, Ship Brokers, and Custom House Agents, 11, Rood-lane.

Phipps, T., Saddler and Harness Manufacturer, 243, High Holborn.

Piggott, W., Army Clothier and Marquee Manufacturer, &c., 115, Fore-street.

Piper, Jno., Wholesale Ironmonger, 47, Beech-st., Barbican.

Pitman, W., Wine Merchant, 150, Fenchurch-street.

Pocock, T., Leather Warehouses and Export Boot and Shoe Manufactrs., 20, 21, 22, 23, Southwark-bridge-rd.

Poole, Dr., Middlefield House, Aberdeen, Private Asylum for Ladies and Gentlemen requiring the aid of a Medical Psychologist.

Porter, James, Sail Maker and Ship Chandler, Fountain Stairs, Bermondsey.

Porter, T., Merchant, 22, East India Chambers.

Poulton, T. A., (late Webb) Wholesale China and Glass Warehouse, 1, Freeschool-street, Horselydown.

Power, D. E., Merchant, 110, Fenchurch-street.

Powis, James & Co., Wholesale and Export Ironmongers, Lock Manufacturers, and General Factors, 26, Watling-street, City.

Prews, B., Great Metropolitan Wardrobe, 295, High Holborn, and 36 and 37, High-street, Aldgate.

Price, C. W., Glass Bender, by appointment, to H.R.H. Prince Albert, Glass Stainer and Embosser, Manufacturer of Shades, Convex Glasses for Clocks, Figures, Barometers, &c., Railway Signal Glasses, Watch, Coloured Sheet, Ground, Dome, and Lotus Glasses, Lamp and Gas Chimneys of all kinds, wholesale, retail, and for exportation, 19 and 20, Clerkenwell-green.

Pryor, S. & T., Umbrella Manufacturers, 43, Holborn-hill.

Rand & Co., Patent Collapsible Tube Manufacturers for Artists' Colours, 24A, Cardington-street, Hampstead-rd.

Read, R., Instrument Maker, (by special appointments), to Her Majesty and the Hon. East India Company, Patentee of the Stomach Pump, Enema Fountain, &c., &c., 35, Regent-circus, Piccadilly.

Richardson & Co., Patentees of Lochhead's Perforated Glass Scuttle for Ship Ventilation, and Perforated Glass for Houses and other Buildings, 35, Royal Exchange, and 373, New Oxford-street.

Richardson, E., Ship and Insurance Agent, East India Chambers.

Richardson, R., Portable House, Marquee, Rick Cloth, and Wire Fence Maker, 21, Tonbridge-place, New-road.

Riley, W. C., & Co., Provision Merchants and Dealers in Bonded Stores, 189, St. George's-st., St. George's, East.

Ring & Conquest, Tin, Iron, and Japan Ware Manufacturers, 22, Banner-street, St. Luke's.

Ritchie & Bond, Warehousemen, 61, St. Paul's Church-yard.

Roberts, J., Importer of Colonial Produce, 31, Barbican.

Roberts's Fashionable Tailoring, Clothing, and General Outfitting Mart, 65, Shoreditch, corner of Church-st.

Robinson, J., & Co., Outfitters, 3 and 6, Nassau-place, Commercial-road, East.

Roddy, R., Linen Manufacturer, Donegal-street, Belfast.

Rogers, D., Pianoforte Maker, Tuner, and Selecter, St. James's-place, Hampstead-road.

Rogers, H., Pianoforte Manufacturer, 63, Warren-street, Fitzroy-square.

Rogers, J. & Son, Patent Pianoforte Makers, with Metallic Plate, and all the Modern Improvements for extreme climates—Merchants and Shippers supplied—27, Southampton-mews, and 67, George-street, Euston-square.

Ross & Sons, Hair-cutters, Dyers, and Peruke Makers to the Royal Family—Inventors of the Invisible Ventilating Peruque for Ladies and Gentlemen—Importers of all Foreign, and Manufacturers of English Perfumery, Wholesale, Retail, and for Exportation—Sole Manufacturers of the Union and Triple Hair Brushes, Tooth, Picktooth Brushes, the Double Anti-pressure Nail Brushes, Medium Shaving and Renovator Clothes Brushes, &c., &c.—Inventors of the Botanic Water for cleansing and stimulating the Growth of Hair, and of the Atrapilatory or Liquid Hair Dye, for producing all Shades, from the deepest Black to the lightest Brown. The only parties who really fatten and kill Bears for their grease.—119 & 120, Bishopsgate-street Within.

Rowed, R., Pianoforte Manufacturer, 40, William-street, Hampstead-road.

Rumney, R., Manufacturing Chemist, Ardwick, Manchester.

Sanders, C., Gold Refiner, St. John's-square, Clerkenwell.

Samson, E., Wholesale Fancy and General Cabinet Manufacturer.—Merchants and Shippers supplied—57, Old-street, St. Luke's.

Samuel, H. S., Colonial Broker, 133, Fenchurch-street.

Scott, J., Mathematical and Nautical Instrument Maker, 17, Bermondsey-wall, opposite Fountain Dock.

Scott, P., Outfitter of every description of Dress suitable for India, China, Australia, Port Natal, New Zealand, &c., ready made or to order, 9, South Bridge, Edinburgh.

Scott, W., Gun & Pistol Maker, 33, Leman-st. Whitechapel.

Scovell, G., Gold and Silver Thread Manufacturer, 29, Clerkenwell-close.

Scroxton, J. H., Tin-Plate Worker and Ornamental Japanner, Manufacturer of Tea Canisters, Tobacco and Snuff Jars, Fancy Tea Bowls and Boxes, 137, Bishopsgate-street Without, near Sun-street.

Scrutton, G. C., Custom House Agent, 93, Gt. Tower-street.

Senior, J., Importer of Colonial Produce, 44, King's-road, East, Chelsea.

Sercombe, T., Merchant, Exeter.

Sercombe, J. C., Merchant, Exeter.

Shaw, L., Collar Manufacturer, 8, Ropemaker-st., Finsbury.

Shaw, Joseph, Piano Manufacturer, 87, Hatton-garden.

Sheppard, J., Draper, &c., Exeter.

Sherwin, J., Ironfounder, Smith, & Range Maker, Steam and Hot-water Apparatus, Manufacturer of the Improved Patent Economic Range, 21, Norton Folgate.

Shove, G., Patentee and Manufacturer of Silicated Marble, Textural Glass, &c., Wholesale, Retail, and for Exportation, 488, New Oxford-street.

Shuter, L., Wood-Hoop Merchant and Cooper, Shad Thames, Southwark.

Simpson, W. & Co., British Gum Manufacturers, Manchester.

Sinclair, C., Glass Chandelier and Lustre Manufacturer, 69, Old-street, St. Luke's.

Sirr, W., Miils, Kirby, Moorside.

Skene, J., Wine Merchant, North-street, Belfast.

Skinner, James & John, Whip Manufacturers, 11, Finsbury-place, North.

SKINNER, S., Clothier and Outfitter, 18, Aldgate High-street; and 13, Queen's-buildings, Knightsbridge.
SMART Jun., W., Composition Ornament Manufacturer, 18, Crown-street, Finsbury.
SMITH, J., Gas Fitter and Brass Finisher, 8, Charterhouse-ln.
SMITH & SONS, Manufacturers of every description of Church and House Clocks, Office Dials and Time Pieces, Watch and Clock Glasses, Cases, Materials, &c., and General Brass Founders, St. John's-square, Clerkenwell (next the Church), and at Birmingham.
SMITH, W., Gas Meter Manufacturer, 66, Snow-hill.
SOMERVELL & BURR, Leather Merchants, 34, Noble-st., City.
SOMALVICO, J., & Co., Opticians and Nautical Instrument Makers, 2, Hatton-garden.
SPALDING & HODGE, Wholesale Stationers, 145, 146, and 147, Drury-lane.
SPARKS, G., Colonial Sack and Bag Maker, Russia Mat Warehouse, and Importer of Scotch Sheetings, Hessians, &c., 21, Swan-street, Minories.
SPARKS, W. J., Pianoforte Maker and Tuner—Instruments repaired, exchanged, and lent on hire—44, George-street, Euston-square.
SPEARMAN, J., Gun Maker and Gun Stock Manufacturer, 25 and 26, Chambers-street, Goodmans-fields.
SPENCER, E., & Co., Waterproof Clothiers for all Climates, and suited for all occupations by sea and land, 116, Fenchurch-street, opposite Mark-lane.
SPRINGWEILER, A., Medicine Chest and Portable Desk and Dressing Case Manufacturer, 2, Duke-st, West Smithfield.
STACEY & Co., Hair Cutters, and Sole Inventors of Peruvian Wash for removing scurf and preventing the hair falling off, indispensable in warm climates, 45, Cranbourn-street, Leicester-square.
STEVENS, J. R., Exchange Broker, 65, Old Broad-street.
STEWART, J., & Co., Foreign Warehousemen, 11, Old Broad-st.
STEWART, C., & Co., Patentees of the Plantagenet Guard Razor, by which shaving can be performed with perfect security against cutting, without the need of looking-glass, or on board ship, in the most tempestous weather, 22, Charing Cross.
STOCKER's Patent Knife Cleaner, and Substitute for Hooks and Eyes for Ladies' Dresses, 503, New Oxford-street.
STODDART, J., Wholesale Watch Manufacturer, 61, Red Lion-street, Clerkenwell.
STODDART, R., Wholesale Watch Manufacturer, 13, Red-Lion-street, Clerkenwell.
STOPP, M. H., Chronometer, Watch, and Clock Maker, 7, Oxford-street.
STORY, G., Scale, Weight, Weighing Machine, and Steel Mill Manufacturer—Coffee, Pepper, Sugar Mills, &c., on the most Improved Principles, 2 & 3, Church-lane, Whitechapel.
STUART, G., Fancy & General Brush Manufacturer, Wholesale & for Exportation, 12, Primrose-street, Bishopsgate.
SURGEY, W. P., Custom House, Shipping, Insurance, and Commission Agent, 2, Langbourn Chambers, Fenchurch-st.
SWIFT, R., Wholesale and Export Leather and Shoe Warehouse, and Consignee of French and other Foreign goods, 98, Hatton-garden.
TALMADGE, J. T., & Co., Wholesale Tea Dealers, 61, King William-street, City.
TAPPOLET, D. L., & Co., Military and Naval Accoutrement Makers, Gold and Silver Lacemen and Embroiderers, 44, Lombard-street, and Little Britain.
TAYLOR, S. C., Pianoforte and Musical Instrument Maker, and Music Warehouse, 512, Oxford-street.
THWAITES and REED, (established 1740,) Manufacturers of Church and House Clocks, Counting Machines, Watchman's Clocks, Wind Dials, Weathercocks, and all kinds of Machinery (original Inventors of the Spiral Door Springs) for Exportation, 4, Rosoman St., Clerkenwell.
THOMPSON, C. R., & Co., Colonial Agents, Winchester House, Old Broad-street.
THOMPSON, W., & SON, Wholesale Brush Manufacturers, 15, Upper North-place, Gray's Inn-lane.
THOMAS, W. F., Tailor and Habit Maker, 4, Argyle-street, Regent-street.
TILLEY, W. J., Engine and Pump Manufacturer, 245, Blackfriar's-road.
TIMOTHY, D., Bed Feather Merchant, 31, Barbican.
TIPPLER, R., Colonial Broker, 89, Great Tower-street.
TIZARD, Mr., Brewer, Morrice-square, Devonport.
TOMS, J., Carpet Bag, &c., Manufacturer, 17, Milton-street, Cripplegate.
TONKIN, J. W., and Co., Custom House and Overland Agents, 44, Regent-circus.
TOREY, J. L. & S. L., Curriers, Leathersellers, Cap Peak, Leather Leggins, and Gaiter Manufacturers, 8, White's-row, Spitalfields.
TOULMIN, J., Manufacturer of Bankers' Bill Cases, Pocket Books, and every description of Leather Goods—Superior Metallic Memorandum Books—18, Sise-lane, City.
TOWNSEND, PARKER, & Co., Paper Stainers, 132, Goswell st.
TREGGON, H., & Co., Zinc and Galvanized Iron Merchants, and Perforators of all kinds of Metal, 22, Jewin-street, and 57, Gracechurch-street.
TROUP, JOHN, Watch Manufacturer and Wholesale Jeweller, 36, Hatton-garden.
TRUEFITT, H. P., Hair Dresser and Dyer, Perfumer, &c.—In Court Head Dressing and Wig Making, H. P. Truefitt still stands unrivalled.—114, Piccadilly.
TUCKER, E., Starch Manufacturer, Waring-street, Belfast.
TUCKETT, G. C., Merchant, Exeter.
TURNBULL & Co., Clothiers, Outfitters, & Men's Mercers, 50, New-buildings, North Bridge, Edinburgh.
TYLER, — Merchant, Worcester.
UDALL, E., Manufacturer of Planes, Saws, Lathes, Tool Chests and Mechanical Tools, Cutlery, &c.—Emigrants supplied with the Best Articles—27, Sloane-square.
VENABLES, WILSON, & TYLER, Wholesale Stationers and Paper Manufacturers, 17, Queenhithe.
VINER, C. E., Watch and Chronometer Maker, 235, Regent-street, and 82, Old Broad-street.
WALKER, E., & SON, Watchmakers and Jewellers, File, Tool, & Material Manufacturers, 55, Red Lion-st. Clerkenwell.
WALKER, E., Brass, Copper, and Iron Wire Weaver, Worker, and Sieve Manufacturer; also, Machine Wire for Flour Mills, &c., 6, Cardington-st., Hampstead-rd.
WALKER, J. & A., Brass Founders, Engineers, Machinists, Gas Fitters, &c., 76, Goswell-street.
WALKER, J., Manufacturer of Improved Corrugated Iron Buildings, Roofs, &c., 63, Gracechurch-street.
WARD, T., Manufacturer of every description of Garden-Chair, Patent Exercising, Self-propelling, and Self-adjusting Chairs and Beds. 5 and 6, Leicester-square.
WATSON, E. G., Sail Maker, Rochester.
WELLS, T., Wholesale Tallowchandler, 16, Lucas-street, Rotherhithe.
WELLS, W., Coachmaker, Lee, near Lewisham.
WEST, Mr., Veterinary Surgeon, Newgent.
WEST, W., Brassfounder, 58, Back Church-la., Whitechapel.
WESTLEY, W., Agent for Northamptonshire Boot and Shoe Manufacturers; Merchants, Captains, and others supplied at first Prices, 23, Bartlett's-bldngs, Holborn-hill.
WHEELER, W. S., Woollen Factor, 4, Ludgate-street.
WHITMEE & CHAPMAN, Manufacturers of Steel, Coffee, and Flour Mills, and Flour Dressing Machines, 18, Fenchurch-buildings, and 70, St. John-street, Clerkenwell.
WHYTOCK, A., Galvanized Iron Works, and Manufacturers of Portable Iron Houses for Emigrants, Garden Engines, &c., 494, New Oxford-street.
WILCOCKS, J. C., Draper, &c., Exeter.
WILLIAMS, H., Mineral and Civil Engineer, 61, Moorgate-st.
WILLIAMS, W., Pipe Maker, Wholesale, Retail, and for Exportation, 295, Kent-street, Southwark.
WILSON, J., Floor Cloth Manufacturer, 253, Strand, near Temple-bar.
WILSON, G., Glass Works, York.
WILSON, Mr., Chemist, York.
WILSON, R., Fish Factor, &c., 103, Lower Thames-street.
WOOD, P. H., Spirit Colouring and Refining Powder Manufacturer, 20, Redman's Row, Mile End.
WOOLF, H., Cap, Cap-peak, and Trimming, Carpet Bag, Ladies' Boot and Shoe, and Slipper Manufacturer, 103, Houndsditch; Enameller and Japanner of Leather, 5, Montague-street, Spitalfields.
WOOLLEY, THOMAS, Ship and Insurance Agent, 2, Cullem-street.
WOOSTER, J., Manufacturer of Portable Desks, Dressing Cases, Work Boxes, Tea Caddies, &c., Wholesale and for Exportation, 9, Long-lane, West Smithfield.
WRIGHT, A., Wrought and Cast Iron Forge and Bellows Manufacturer, on the most Improved Principle, 16, Little Alie-street, Whitechapel.
WYATT, F., & Co., Tailors and Drapers, 20, St. Martins-le-Grand.
YEATMAN, J. W., Shirt Maker and Outfitter for India and the Colonies, 146, Leadenhall-street.

having been offered for sale by advertisement; and although the liability of each proprietor was not limited by a royal charter. Business was commenced by a junction with the *Tamar Bank* at Launceston, Van Diemen's Land; a branch was next opened at Hobart Town, Van Diemen's Land; then at Sydney, New South Wales; next at Melbourne, Port Phillip; and subsequently at New Zealand, and in other parts of Australasia. The number of branches is now ten; they are managed, as are those of the *Bank of Australasia*, by an excellent board of directors in London, with boards of local directors in the colonies.

This institution has been admirably conducted from its commencement; the dividends paid annually have ranged from six per cent. to ten, the average of the whole period has been eight per cent. The bank has now a paid up capital of £820,000, and a subscribed capital of £1,000,000. Through this excellent institution, as also through the *Bank of Australasia*, money may be safely and economically transmitted from England to any part of Australia, and *vice versa*.

The Commercial Bank at Sydney, New South Wales, is a modern establishment. It has a capital of £73,000 paid up. By prudence it withstood the recent commercial crisis, and pays a dividend of ten per cent. per annum.

An *Australian Trust Company*, has been established in London by royal charter, with a capital of £1,000,000; I believe it operates principally by making advances on land, stock, &c.; its proceedings do not therefore appear among the banking returns; neither does the *Scottish Australian Investment Company*, whose funds are employed in advances in Australia. For the last few years the operations of such institutions must have been very difficult, but when the colonial depression passes away, the field for investment is large, lucrative, and, judiciously conducted, perfectly safe.

Savings' Banks are established in different parts of the colony. The deposits in them in February, 1849, were, at Sydney, by 3,606 depositors, £142,104; Windsor, 88 depositors, £2,496; Paramatta, 115 depositors, £2,287; Maitland, 89 depositors, £2,500; Bathurst, 78 depositors, £3,077; Penrith, four depositors, £120. The total deposits, including other sums, was £172,638

The coin in the colony, in proportion to the population, was per head in 1836, £5 9*s*., in 1837, £5; in 1838, £5 6*s*.; in 1839, £4 10*s*.; in 1840, '41, '42, £3. This explains the commercial crisis of 1841–2.

The following is a general abstract of the sworn returns, rendered pursuant to the act of Council, 4th Victoria, No. 13, of the average assets and liabilities, and of the capital and profits of the undermentioned banks of the colony of New South Wales, for the quarter ending 31st March, 1849:—

Liabilities, Assets, Capital, &c.	New South Wales.	Commercial.	Australasia.	Union of Australia.	Total.
LIABILITIES:—					
Notes in circulation	£34,519	£31,226	£79,560	£90,369	£235,675
Bills in circulation	—	—	13,117	7,803	20,921
Balances due to other banks	—	—	—	212	212
Deposits	225,767	152,735	354,781	412,070	1,145,354
Total liabilities	260,286	183,961	447,459	510,455	1,402,163
ASSETS:—					
Coin	157,564	90,958	146,774	245,610	640,908
Landed property	12,570	3,600	15,820	27,018	59,009
Notes and bills of other banks	—	47	1,376	—	1,424
Balances due from other banks	5,599	12,772	—	3,022	21,393
Notes and bills discounted, and all other debts due to the banks	225,793	152,566	779,240	467,159	1,624,760
Total Assets	401,528	259,945	943,212	742,810	2,347,497
CAPITAL AND PROFITS:—					
Capital paid up	125,283	72,955	900,000	820,000	1,918,238
Rate per annum of last dividend	8 per cent.	10 per cent.	Nil.	6 per cent.	—
Amount of dividend	5,011	3,237	—	25,317	33,566
Amount of reserved profits after paying dividend	17,150	993	53,451	77,930	149,526

Note.—Out of reserved profits of the N. S. Wales Bank, a bonus of 5 per cent. was, at the same time, paid to Shareholders; and a bonus of 5*s*. per share, equal to 2 per cent. was also paid by the Union Bank of Australia.

The quantity of coin in the colony for twelve years is thus shewn; it is to be observed that the local government deposits its treasure among the several banks, which will account for the small sum in the colonial treasury.

Coin in the Colonial Treasury, the Military Chest, and the several Banks, on 31st December in each year from 1837 to 1848, inclusive.

Year.	Colonial Treasury.	Military Chest.	Banks.	Total.
1837	£245,250	—	£182,182	£427,432
1838	163,000	—	357,127	520,127
1839	124,100	—	391,969	516,069
1840	38,900	£49,151	309,529	397,581
1841	25,000	10,000	427,624	462,624
1842	—	32,409	442,980	475,389
1843	—	3,000	420,972	423,972
1844	—	11,000	548,923	559,923
1845	20,000	54,315	780,850	855,166
1846	25,000	121,173	681,132	827,306
1847	30,600	30,056	573,529	634,186
1848	20,600	15,082	598,121	633,803

Of the whole coin, probably not £50,000 is in active circulation, which, added to about £150,000 bank notes in active circulation, will not give of paper and gold one pound per head annually for the circulating medium of the colony; whereas it ought at the least be five times that amount to facilitate the transfer of property, which takes place yearly to the amount of several millions. The sales by auction alone are now (1850) more than one million sterling annually, and this description of business has largely increased, as shewn in the following table :—

Auction Duty paid into the Colonial Treasury of New South Wales (including the District of Port Phillip) from the year 1834 to 1848, inclusive.

Year.	Amount of Duty.	Amount of Sales.
1834	£2,327	£155,156
1835	3,135	209,053
1836	4,697	313,171
1837	4,820	321,346
1838	6,137	409,166
1839	7,700	513,388
1840	18,701	1,246,742
1841	14,455	963,696
1842	10,291	686,088
1843	6,818	454,565
1844	4,662	310,831
1845	6,068	404,542
1846	6,217	414,490
1847	7,061	470,781
1848	4,551	787,800

Note.—From 1st January, 1848, the duty was reduced from 30s. to 10s. per cent., by Act of Council, 11th Victoria, No 16, but was made chargeable on all sales effected by licensed auctioneers by private bargain as well as by auction.

The amount of British coin in New South Wales on the 31st of December, 1848, was—In colonial treasury, £20,600; military chest, £15,082. *Banks*—New South Wales, £176,430; commercial, £79,724; Australasia, £137,887; Union, £204,078; in the hands of private individuals, supposed £20,000. Total, £653,803. Paper currency in circulation: *Banks*—New South Wales, £31,716; commercial, £25,601; Australasia, £74,292; Union, £74,194. Total, £205,803. This may be considered a sound state, when there is only £205,803 paper note circulation against £654,803 in coin. Such an amount of circulation is, however, far too small for the healthy business of the colony.

At the period of the commercial difficulties, in 1842–3, the local legislature passed a law "to give a preferable lien on wool, from season to season, and to make mortgages of sheep, cattle, and horses valid without delivery to the mortgagee." This law, as regards live stock, was based on the principle that had been adopted for more than a century in the West Indies, where slaves were made real estate, and were literally walking freeholds, subject to all the incidents of freehold property. Although, in this respect, opposed to the spirit of the British laws, the colonial Legislative Council, after two years' trial of the act, finding it beneficial to the colonists, recommended its continuance; and as live stock could not carry on its backs the muniments or title deeds belonging to real property, an efficient registry of all transactions respecting them was adopted. The annexed shows the amount of mortgages since 1843. (This return does not include the Port Phillip district). In a statement of the registrar-general, dated Sydney, 30th January, 1847, it is remarked that, in the return of the number of sheep and amount of money advanced under the Lien Act, it would appear as if an additional sum was advanced each subsequent year upon that mentioned to have been advanced the year previous. It must, however, be borne in mind that as the Lien Act only authorises an advance to be made on the ensuing clip of wool, the liens are renewable every year, and that consequently the same sheep and money may be included in one year as that mentioned for the previous year. The same remark may also apply to the mortgages of sheep, cattle, and horses, as the mortgages are generally made redeemable a twelvemonth from the date thereof.

In the return of the amount secured by mortgages of real estate, however, the repayment of the amount is upon an average required to be made every three or four years, consequently in the return under this head the same money may have been relent and resecured thrice within ten years.

Number and amount of preferable Liens on Wool, and of Mortgages on Live Stock, registered at Sydney.

Liens and Mortgages.	1843.	1844.	1845.	1846.	1847.	1848.
Preferable liens on wool:—						
Number of liens	54	139	125	149	199	240
Number of sheep	318,739	837,997	657,989	813,951	1,095,402	1,378,180
Amount of liens	£30,664	57,733	55,865	71,351	107,447	108,892
Mortgages on live stock:—						
Number of mortgages . . .	96	226	152	146	168	205
Number of sheep	397,995	694,381	464,713	491,518	623,257	1,118,762
Number of cattle	44,430	81,679	49,131	42,870	45,578	84,411
Number of horses	903	2,158	1,568	1,070	1,110	2,056
Amount lent	£178,567	241,727	132,355	150,733	137,856	219,756

There are no usury laws in New South Wales. The Legislative Council recently proposed to reduce the legal rate of interest to not more than eight per cent.; but her Majesty's government rejected the proposition. It is not possible to state accurately, therefore, at what rates money is lent on wool and live stock, nor on mortgages of land; but the range is about eight to ten, or even twelve, per cent.

Return of the number and amount of Mortgages on Land in the colony of New South Wales, registered at Sydney, from the year 1837 *to* 1846, *inclusive.*

Year.	Lent on Town Lands.		Lent on Country Lands.		Lent on Town and Country Lands.		Total.	
	No. of Mortgages.	Amount.	No. of Mortgages.	Amount.	No. of Mortgages.	Amount.	No. of Mortgages.	Amount.
1837	145	£108,860	130	£102,817	11	£19,336	286	£231,014
1838	139	59,702	207	174,388	10	14,801	356	248,891
1839	159	112,835	213	189,447	11	46,534	383	348,818
1840	155	112,158	281	355,224	23	47,358	459	514,741
1841	241	266,944	417	643,111	51	188,685	709	1,098,741
1842	238	282,659	333	384,566	54	157,186	625	824,412
1843	246	275,386	285	333,487	51	446,707	582	1,055,580
1844	192	94,400	252	144,352	50	61,065	494	299,818
1845	135	111,659	152	107,585	31	53,577	318	272,822
1846	146	64,856	148	86,726	14	18,792	308	170,374
1847	156	81,516	149	82,605	15	16,432	320	180,554
1848	196	110,501	103	70,572	8	21,572	307	202,646

The colonists are not, certainly, largely in debt, either to capitalists or to the bank; and there appears fair grounds for assuming that their mercantile affairs are now in a sound and prosperous state.

Public Companies. — There are several institutions in New South Wales connected with the commercial affairs of the colony. The *Australian Agricultural Company* was formed in London, by royal charter, in 1824. The design of the projectors was—

1st.—The breeding of horses, on an extensive scale, for sale in New South Wales and in India.

2nd.—The breeding of cattle and other live stock, the raising of corn, tobacco, &c., for the supply of residents in the colony, and the manufacture of salt.

3rd.—The introduction, at a future period, of wine, olive oil, hemp, flax, silk, opium, &c., as articles of export, and the raising of coal at Newcastle, N.S.W.

To enable the company to carry their objects into effect, a grant of 1,000,000 acres of land was made to them in fee simple by his Majesty's government. This grant has been selected in three locations, viz.—

At Liverpool Plains . .	about 250,000 acres.
Peel's River	„ 310,000 „
Port Stephens . . .	„ 440,000 „

Of this territory, the company have the power of leasing or selling 500,000 acres, after the expiration of five years, provided the sum of £100,000 shall have been expended on the land, in the formation of roads, the erection of buildings, clearing, cultivating, fencing, draining, or other improvements; and also of alienating any portion of the remaining 500,000 acres, by licence from his Majesty's secretary of state.

On the 31st of March, 1834, the total number of sheep belonging to the company were—French Merino, 4,940; Saxon Merino, 2,866; Anglo-Merino, 1,552; improved colonial, 27,254:—total of sheep, 36,615. Of horses, thorough-bred and Cleveland, and the produce of those breeds, 197; colonial ditto, 129; Welsh and Timor ponies, and their produce, 58: total, 384. Of cattle, Durham, 23; improved colonial, 330; Scotch, 51; improved colonial, 867; colonial, 1,305; working oxen, 227: total, 2,803.

The following is a return of the stock of horses, horned cattle, and sheep of the Australian Agricultural Company, at periods of five years from the establishment of the company to present date:—

Periods.	Horses.	Horned Cattle.	Sheep.
Formation of company	13	208	958
1830	245	2,227	21,365
1835	422	2,924	55,695
1840	569	5,187	79,961
1845	972	7,189	124,205
1850	not	yet	known.

Note.—Intermediately from the formation of the company to the year 1830, a considerable number of cattle and sheep were introduced by purchase and importation; in the year 1830 importation ceased; and from 1835 to 1845, large sales, slaughter for maintenance of establishment, and boiling down proceeded to a large extent; there were also some items of casualties—age, accident, and disease.

In the year 1825, a negotiation was concluded with his Majesty's government, by which the mines of coal in New South Wales which had been previously worked by the local government, were transferred to the company, with a grant of 2,000 acres of the coal field. These mines are situated at Newcastle, about sixty miles to the north of Sydney, at the south entrance of a secure harbour, called Port Hunter. The coal is being largely worked (see mines.) The arrangements with her Majesty's government are now satisfactorily concluded, and it is to be hoped that the shareholders who have invested their capital in this useful association to the amount of £300,000 will now begin to reap some reward for their well-directed exertions and sacrifices.

The Australian Agricultural Company is now offering for sale or lease all that portion of its valuable estate near Port Stephens, containing about half a million of acres, which are bounded by the river Manning, intersected by other streams, and provided with roads and bridges, which have been constructed by the company at a cost of many thousand pounds. There are churches and schools, and a resident clergyman, schoolmaster, and surgeon are paid by the company for the benefit of their servants.

The farms, which have been long in cultivation, with other erections, are offered for sale at twenty years' purchase on the estimated annual value.

The uncultivated land will be sold in lots of fifty acres and upwards, at £1 per acre; each £50 paid in England entitling the purchaser to a choice, and a free passage; and each lot will include a right of pasturage for stock on adjoining land until required for sale.

Among other institutions in the colony there is a *Savings' Bank* at Sydney; an *Australasian Colonial and General Life Assurance and Annuity Company*, whose head establishment is in London; a *Sydney Fire Insurance Company;* a branch of the *Imperial Fire Insurance Company* of London; an *Australian Gas Light Company*, with a capital of £45,000; a *Hunter River Steam Navigation Company;* a *Sugar Company*, and other public associations, which are well managed, and conducted with a degree of probity unsurpassed in any other community in the British empire.

The following brief chronological record illustrates the rise and growth of this remarkable section of the British empire:—

1789, one year after the establishment of the colony, *first* harvest reaped (at Paramatta): 1790, *first* settler (a convict) took possession of the land allotted him; 1791, *first* brick building finished; 1793, *first* purchase of colonial grain (1,200 bushels) by government; 1794, *first* church built; 1800, *first* copper coin circulated; 1803, *first* newspaper printed; 1804, Fort William built; 1805, *first* vessel built; 1810, *first* census, free school, toll-gates, police, naming of the streets, establishment of Sydney market, races, and race ball; 1811, *first* "pound;" 1813, *first* fair; 1815, *first* steam-engine; 1817, supreme court established, and *first* bank; 1818, benevolent society formed; 1819, orphan institution founded; 1820, *first* spirits distilled, and *first* colonial tobacco sold; 1821, *first* Wesleyan and Roman Catholic chapels built; 1822, freedom of the press granted, and *first* agricultural and reading societies formed; 1824, charter of justice granted, Legislative Council appointed by the crown, and *first* court of quarter sessions held; 1825, *first* criminal jury im-

pannelled, *first* archdeacon ordained, *first* coroner appointed, and *first* constitutional county meeting held; 1827, *first* daily newspaper established; 1829, *first* circuit court opened; 1830, *first* civil jury impannelled, and *first* college founded; 1831, *first* colonial steam-boat launched; 1832, *first* savings' bank instituted; 1833, mechanics' school of arts formed, and a monthly magazine established; 1834, land sold in Sydney at £20,000 per acre; 1835, *first* Protestant bishop of Australia; 1840, Legislative Council (twenty-four elective members, and twelve crown nominees), sheep sold at 1*s.*6*d.* each, and thousands "boiled down" for the sake of their tallow; 1842, Sydney incorporated (population about 40,000); money provided for emigration from 1832 to 1849, by the sale of land, one million and a quarter sterling; 1850, sheep in the colony nearly 12,000,000, horned cattle nearly 2,000,000, horses, 150,000, pigs 100,000, population estimated at 250,000, no convicts in the colony, and grant of a representative Assembly and responsible government to the colonists.

Future Prospects.—The rapid strides by which New South Wales has acquired its present position, are so extraordinary, as to raise fears for its duration. These fears would be only too well grounded, if the future prospects of this extensive country, and of its increasing population, depended solely on pastoral pursuits. Had New South Wales no agricultural capabilities, no mineral wealth, no fisheries, then indeed might we look forward with melancholy foreboding to the time when her vast pastures would be overthronged, as the epoch which sooner or later must arrive, and mark the period of decadence. But the pastoral age is the primary step in the history of a people possessed of the varied elements necessary to constitute a mighty and permanent empire. The reason is sufficiently evident; the pastoral resources of a newly-discovered region are naturally the most readily available to the settler, who from thence obtains not only present sustenance, but the means of developing the less prominent, but more intrinsically valuable capabilities of the soil.

That the colonists themselves are not disposed to consider their fine country as a vast "sheep walk," or to restrict their energies to the multiplication of flocks and herds, is evident from the facts adduced in the previous pages, and from the tone of their public journals. The editor of the *Sydney Morning Herald*, in a "leading article," dated 20th October, 1849, on the "Destinies of the colony," states, that according to the ratios of increase which have heretofore prevailed, the number of sheep in New South Wales will, in the year 1857, amount to *thirty-two million*, and the number of other live stock to *five and-a-quarter million*. For the depasturing of these animals, it is estimated an area of 231,000 square miles would be required. It is calculated, that in 1857, the sheep and other stock in New South Wales and Port Phillip, independent of those in Southern and Western Australia, will exceed *one hundred and forty-five million*, and require 875,000 square miles of pasturage, or about one-third the area of the whole island. This is assuming that about four acres are necessary to feed each head of live stock. Making ample allowance for the disturbing causes by which such calculations are affected, the urgent necessity for the production of other staple exports may be considered as sufficiently proved, although, of Australian wool alone (it may be right to add), England could receive for her domestic use and foreign exports, at least one hundred million pounds.

The first steps in the progress from the nomadic to the agricultural state, have been taken; New South Wales now not only grows sufficient grain for the consumption of her own people, but has become an exporting country; five years ago, its vineyards covered only 500 acres, now they extend over 1,000; and the wine made from them has increased, within the same period, from 30,000 to 100,000 gallons. The colonial mills have increased in nine years from seventy-seven to 172. and the domestic manufactures, in the same period, from fifty to 133. The vine, the olive, and the mulberry—cotton, sugar, and tobacco—hemp, timber, and tallow, may all be produced to an almost incalculable extent in Australia, and are all in constant and increasing demand in Europe. Humanly speaking, therefore, the welfare of this colony rests on a sound basis, and, with the blessing of Divine Providence, its future greatness may seem as marvellous to our descendants, as the position it has already attained appears to those whose lengthened span of life has enabled them to watch its progress from the infant, starving, struggling penal settlement at Sydney Cove, to the flourishing colony of New South Wales.

BOOK III.—VICTORIA, OR PORT PHILLIP.

CHAPTER I.

POSITION—BOUNDARIES—HISTORY—TOPOGRAPHY—GEOLOGY—AND CLIMATE.

This division of the island-continent of Australia, comprises the extreme southern portion, between the parallels of 37° and 39° S. lat., and the meridians of 141° and 150° E. long. The area is estimated at 97,000 square miles, *i. e.* about 10,000 square miles larger than England, Wales, and Scotland.* The chief harbour was called Port Phillip, after the first governor of New South Wales, when discovered by lieutenant Murray, in 1802. Sir T. Mitchell, who explored the country in 1836, gave it the name of Australia Felix, from the beauty of the scenery; and it is in future to be termed Victoria, in honour of our gracious sovereign.

In a bill now under discussion in parliament, for separating the district called Port Phillip from the Sydney or Middle District of New South Wales, erecting Port Phillip into a separate province, under the name of Victoria, and granting to the Australian colonies constitutional forms of government, this district is stated to be "bounded on the north and north-east by a straight line drawn from Cape Howe to the nearest source of the river Murray, and thence by the course of that river to the eastern boundary of the colony of South Australia." On the south it is separated from the island of Van Diemen, or Tasmania, by Bass' Strait.

History.—Captain Cook (of whom fuller mention will be made in the history of New Zealand,) visited the south coast of Australia, near Cape Howe, 19th April, 1770, and proceeded to the northward. After the British settlement was formed at Sydney Cove (Port Jackson) in 1788, attention was directed to a survey of the adjacent southern shores; and, in 1798, Mr. Bass, surgeon of H.M.S. *Reliance,* with a whale-boat and six men, sailed along the south-east coast, doubled the projecting cape termed Wilson's Promontory, entered the strait now called after him, and anchored in a harbour which he termed Port Western, from its situation with reference to Sydney. His scanty supply of provisions compelled him to return to Port Jackson. The talents and intrepidity of this successful explorer, induced the governor of New South Wales to direct him, together with lieutenant Matthew Flinders, to prosecute the survey in a schooner, built at Norfolk Island, of twenty-five tons burthen. In this small vessel, named the *Norfolk,* these gallant officers sailed, in October and November, 1798, through Bass' Strait; and, as noted at p. 368, demonstrated the insularity of Tasmania. In March, 1802, lieutenant Murray, in command of H.M. brig *Nelson,* a vessel of sixty tons burthen, in which lieutenant Grant had sailed from England to Australia, entered a large harbour a little to the westward of Port Western; and a few weeks after, captain Flinders, in H.M.S. *Investigator,* visited the same noble haven, which received the name before-mentioned from captain Hunter, R.N., then governor of New South Wales, in honour of his esteemed predecessor. Flinders described the coast as "a grassy country, capable of supporting much cattle, though better adapted for sheep."

While captain Flinders was exploring the coast adjacent to Port Phillip, he fell in with captain Baudin, a French naval surveyor, who had given the name of *Terre Napoleon* to a considerable portion of the south coast previously visited by Flinders. His Majesty's government, probably with a view to prevent a French colony being there formed, and at the instigation of Flinders, determined, in 1803, to found another penal settlement at Port Phillip; and colonel Collins, of the royal marines, was sent from England with a fleet of convicts and a military guard. He reached his destination, and landed at Point Nepean, in 1804. Mr. Grimes, then surveyor-general of New South Wales, was despatched from Sydney to make a survey of the port; but he was evidently

* England, 50,400; Wales, 7,500; Scotland, 30,300; total, 88,200 square miles.

unfit for the duty assigned him; for he failed in discovering the river Yarra Yarra, and obtained water only by sinking wells in the sand.

Lieutenant-governor Collins, despairing of success, and finding that many of the convicts were endeavouring to escape by taking to the woods, re-embarked the prisoners and their guard, and proceeded to the Derwent river, in Van Diemen's island, where he landed, and in conjunction with lieutenant-colonel Patterson, who had been sent from Sydney, founded the settlement now known as Hobart Town. For twenty years from this period this portion of Australia was neglected. In 1824 Messrs. Hovell and Hume made an overland journey from Appin in Cumberland county, New South Wales, to the southward and westward, crossed the Murrumbidgee river, and after a severe and perilous journey, reached the sea coast, at a bay called Geelong by the natives, on the 16th of December, 1824. Geelong Bay forms the western portion of the haven of Port Phillip. In consequence of the representations of these gentlemen, the governor of New South Wales, in 1826, sent captain Weatherall, R.N., with a party of soldiers under captain Wright, to take possession of Western Port, and form there a station which might attract settlers. A small fort was erected at the east extremity of Phillip island, which lies across the mouth of the port, and the projected settlement was made upon the mainland of the opposite shore. Captain Weatherall reported that coal was to be found in the vicinity of the station, both on Phillip Island and at Cape Patterson; but although the description of the place was favourable, no settlers resorted thither, and in about two years the military and naval force was recalled, and the station abandoned. To the colonists of Van Diemen's Land is due the credit of having commenced the permanent settlement of Port Phillip. The colony which had been founded at the Derwent river, on the southern shores of Van Diemen's Island, in 1804, gradually extended to the river Tamar, at Launceston, on the northern shores of the island; and whaling establishments were formed in Bass's Strait, whence excursions were frequently made to the adjacent shores of Australia. The whalers, more intent on fishing than grazing, paid little attention to the Port Phillip shores, but rumours of a favourable character respecting a fine, grassy country reached the flock-owners of Van Diemen's Land, who began to feel straitened for sheep pastures. At Two-fold Bay, a little to the northward of Cape Howe, an extensive cattle station was established by the Messrs. Imlay, from Sydney; and in 1834 a whaling station was fixed at Portland Bay by the Messrs. Henty, from Launceston. In April, 1835, six Launceston settlers, Messrs. S. and W. Jackson, John Pascoe Fawkner,* Marr, Evans, and Lancy, formed themselves into an association to proceed with their families and stock to the opposite shores of Port Phillip. It was necessary to send for a suitable vessel to Sydney; in the mean time their intention was made known, the proposition was favourably viewed, and became the absorbing topic of the day. Mr. John Batman, descended from European parents, and born at Paramatta, but then a settler in Van Diemen's Land, New South Wales, resolved to take the lead in this novel enterprize:—on the 12th of May, 1835, he embarked, with seven semi-civilized natives of New South Wales, in a small vessel at Launceston, Van Diemen's Land, and directed his course to Port Phillip, distant from the mouth of the Tamar 190 miles. Arriving at Port Phillip (called Iranmor by the natives), Batman landed, and on the day after his arrival met with a party of the aborigines on the banks of the Weir-abee (the river Ex of the colonists),† to whom he explained that he intended for the future to reside among them, with his wife and seven daughters, and that he wished to purchase some of their land for depasturing his stock; and he presented them with blankets, tomahawks, knives, scissors, looking-glasses, and necklaces. The aborigines appeared disposed to entertain his proposition; he remained a month at Port Phillip, and seems to have conducted himself with considerable tact as well as good feeling,—he induced the natives to cede to him, his heirs, and successors, a tract of country "extending across from Geelong harbour about due south for ten miles, more or less, to the head of Port Phillip, taking in the whole neck or tract of land, and containing about 100,000 acres." For this he agreed to render in return "a yearly rent or tribute of fifty pair of blankets, fifty knives, fifty tomahawks, fifty pairs of scissors, fifty looking-glasses,

* Credit is due to this gentleman for establishing the first newspaper in Port Phillip; it was issued in manuscript, but subsequently printed in a foolscap form, and is now (1850) a flourishing daily paper.

† See *Information on Australia Felix in* 1840, by George Arden, Esq., then the able editor of the *Port Phillip Gazette.*

twenty suits of slops or clothing, and two tons of flour." The deed of assignment was signed by Jaga-Jaga, Cooloolack, Bungarie, and others, eight of the natives, with a mark ×. By another deed Batman purchased "all that tract of country situated and being at Port Phillip, running from the branch of the river at the top of the port, about seven miles from the mouth of the river forty miles north-east, and from thence westerly forty miles across Iramnoo Downs or Plains, and from thence S.S.W. across Mount Vilnmarnatar to Geelong harbour, at the head of the same, and containing about 500,000 acres, more or less." For this Batman agreed to pay to the eight aborigines as annual rent or tribute, "100 pair of blankets, 100 knives, 100 tomahawks, fifty suits of clothing, fifty looking-glasses, fifty pairs of scissors, and five tons of flour." These deeds were signed and exchanged "on the banks of Batman's Creek, 6th of June, 1835." Batman promised also to protect the natives, to employ them in the same manner as the New South Wales aborigines, to clothe and feed them. He certainly seems to have gained the good-will of the Port Phillip savages. The total value of his proposed tribute was about £200 per annum. After leaving three Europeans and five New South Wales natives to erect a house, and prepare some ground, Batman re-embarked for Launceston on the 14th of June, and reached the Tamar river in thirty-six hours. On arriving in Van Diemen's Land he proceeded to Hobart Town, where an association, consisting at first of sixteen individuals, was quickly formed for the colonization of Port Phillip. Money was subscribed, and Batman appointed agent for the company.

Previous to departing from Hobart Town for Port Phillip, on his second journey, Batman addressed to colonel George Arthur (then lieutenant-governor of Van Diemen's Land) a letter, dated 25th June, 1835, in which he laid fully before the colonial government the course that he had adopted. He stated that, for the previous six years, he had been most actively employed in endeavouring to civilise the aborigines of Van Diemen's Land; that, under his guidance, the humane objects of the local government towards the aborigines had been carried into effect; that, in 1827, himself and Mr. Gellibrand had addressed a joint letter to the government of New South Wales, soliciting permission to occupy land at Port Phillip or Western Port, and to export stock thither to the value of £5,000, to be placed there under his personal superintendence; and that this application was not granted by the government at Sydney, because the land in question was beyond the limits of that territory, and the occupations of Western Port had been altogether abandoned.

Batman, in his letter to governor Arthur, stated, that he confidently trusted the British government would duly appreciate the treaty he had entered into with the aborigines—would not, in any manner, molest the arrangements he had made, and that he should receive the support and encouragement, not only of the local government, but also that of his Majesty's ministers, in carrying the objects into effect. Finally, he described the country in the following terms:—

"I traversed the country, in opposite directions, about fifty miles, and having had much experience in lands and grazing in New South Wales and in this colony, I have no hesitation in asserting, that the general character of the country is decidedly superior to any which I have ever seen. It is interspersed with fine rivers and creeks, and the downs were extended, on every side, as far as the eye could reach, thickly covered with grass of the finest description, and containing an almost indescribable extent of fine land, fit for any purposes."

Governor Arthur, in a letter, dated Government-house, Van Diemen's Land, 4th July, 1835, transmitted copies of Batman's letter and deeds of transfer with the natives to the secretary of state for the colonies, soliciting that he might be "made acquainted, at an early period, with the views which his Majesty's government entertained upon this very important subject." The governor added, that Mr. Batman was an enterprising settler, that he had acted with prudence as well as humanity in his intercourse with the aborigines, but that it was doubtful whether a migratory savage tribe, consisting of thirty or forty individuals, roving over an almost unlimited extent of country, could acquire such a property in the soil as to be able to confer upon the purchaser the right of possession which would be recognised in our courts of law. The governor further hinted to his Majesty's secretary of state, that the land had been taken possession of, for the crown, by colonel Collins, previous to the settlement of Van Diemen's Land, and subsequently by captain Wright, in 1826. He also stated, that the formation of a colony at Port Phillip would be highly advantageous to Van Diemen's Land; that a liberal grant of land would be a well-bestowed gift on Mr. Batman, but that he had informed the explorer

that, with regard to the confirmation of his treaty with the natives, he could not hold out the slightest prospect of its being favourably considered.

Lord Glenelg, then his Majesty's secretary of state for the colonies, replied to governor Arthur's communication of 4th July, 1835, in a despatch, dated Downing Street, 23rd January, 1836. His lordship therein stated, that he would not then enter into the question of the right possessed by the chiefs who were the contracting parties to the territory of which they agreed to dispose, or of the justice and fairness of the arrangement, but would simply advert to the practical question at issue, namely, the expediency of confirming the grant to an association. All schemes for making settlements by private individuals or companies in the unlocated districts of Australia, had of late years been discouraged by his Majesty's government, as leading to fresh establishments, involving the mother country in an indefinite expense, and exposing both the natives and the new settlers to many dangers and calamities. His lordship added—"And there is so much of prudence and of justice, and, I think I may add, of humanity, in this policy, that I do not feel disposed to depart from it in the present instance. The conduct of Mr. Batman towards the natives has been such as to make me regret that I find it my duty not to advise his Majesty to sanction the proceedings of that gentleman and his associates."

Lord Glenelg concluded by saying, that the proposition of forming a settlement in the vicinity of Port Phillip, and of placing it under the jurisdiction of the supreme court of Van Diemen's Land, seemed open to some very serious objections; but it should receive every consideration. Meanwhile Batman, who appears to have anticipated a more favourable reply, proceeded to a minuter survey of the vast estates he considered himself to have purchased, and selected for his own residence the central position of Indented Head, situated about fifteen miles from the entrance to Port Phillip, and commanding a beautiful and extensive prospect. While these events were occurring, the six Launceston settlers, headed by Messrs. Jackson and Fawkner, had procured their vessel from Sydney, which they denominated the *Enterprise*. In this they embarked with their families and live stock, but a gale of wind drove them back into the Tamar; they again set sail, and reached Western Port, but not considering the land inviting, the *Enterprise* proceeded to Port Phillip, which it reached on the 30th August, 1835. Batman viewed, with a jealous eye, these intruders on his broad domains, and warned them against encroaching on his territories. Threats of legal proceedings induced the Messrs. Jackson to move beyond the limits to which he laid claim, and they settled on a fine tract of pastoral land, situated upon the Salt Water river, (called the Arndell by Hume), about twenty miles above its junction with the waters of the Yarra Yarra river. Fawkner, however, disregarding the minatory proclamations of Batman, took up a position of great beauty and promise on the north bank of the Yarra Yarra, about eight miles by the course of the river, from its junction with the upper termination of the bay.*

The locality thus chosen must have been peculiarly attractive to a pastoral eye: the banks of the river sloped gently to a rising ground, covered with luxuriant grasses; and from the summit of the eminence on the northern bank, the waters of the bay of Port Phillip, distant two miles, were visible to the southward, over the tops of the trees of an intermediate flat. The country, in a northern direction, was of an undulating character, covered with grass and moderately wooded, and the Yarra Yarra rolled its deep and dark waters from the eastward, between banks that were occasionally lofty and picturesque, while the grassy downs were covered with the light-bounding kangaroo and the majestic emu, who enjoyed the fertile region until then undisturbed, save by a few wandering savages.

The Yarra Yarra, at the part where Fawkner fixed his camp, expanded its waters into a basin, well adapted for the reception of shipping. At the upper extremity of this natural dock, a ledge of rocks partially crossed the river, which occasioned a fall in the body of the water, and served to protect the freshness of the upper portion of the stream from the influx of the brackish or salt stream caused by the flood tide. The river pursued a circuitous course to the westward. A salt-water lake, or swamp, skirted its northern bank; and beyond appeared the beautiful valley of the Salt-water river, which united with the Yarra Yarra about four miles above its junction with the bay. In this favourable situation Fawkner com-

* Westgarth's *Australia Felix*.

menced ploughing the ground, and planting his corn and seeds, which in the ensuing harvest yielded him an ample reward. To add to his resources, Fawkner opened a "public-house." Batman, finding how formidable a rival he had to compete with, removed from the inconvenient locality he had previously chosen, at Indented Head, to a spot nearer the camp of Fawkner; and on a beautiful green he opened a general store, to supply the wants of the colonists, who now began rapidly to crowd to this land of promise. That the position of Fawkner was well selected, is evident from its being subsequently chosen by his Majesty's government for the site of the capital of the rising settlement; and the rude log dwellings of Fawkner and Batman are now overshadowed by the handsome buildings of the prosperous city of Melbourne.

To return to the chronological history of the settlement. The intelligence of the fine country round Port Phillip; the knowledge that numerous flocks and herds, belonging to Messrs. Henty and other settlers near Port Dalrymple, Van Diemen's Land, had been conveyed to the opposite coast at Cape Portland, in 1834, where they throve well, and increased with great rapidity; a failure in the supply of pasturage in the available districts of Van Diemen's Land; and the desire of some to remove from a settlement where bush-ranging convicts made life and property insecure,—these and other causes led to a Port Phillip fever; and many hastened with their flocks and families to the fertile shores from which glowing accounts were daily received at Launceston.

The governor of New South Wales, Sir Richard Bourke, deeming the Port Phillip country within the territories subject to his jurisdiction, issued, with the advice of his executive council, a proclamation, dated Sydney, 26th August, 1835, declaring that the lands in question were the property of the British crown; that all treaties, contracts, or bargains with the aboriginal natives for the purchase of said lands, were "void against the rights of the crown;" and that all persons found in the possession of such lands, without the licence or authority of his Majesty's government, would be considered and dealt with as trespassers. A copy of this proclamation was transmitted, by Sir R. Bourke, to his Majesty's secretary of state for the colonies, on the 10th October, 1835. In this able despatch, the governor pointed out the fallacy of endeavouring to restrain the population of New South Wales from dispersion; that the very nature of their main pursuit—sheep-farming and depasturing cattle, compelled the colonists to send, yearly, large flocks beyond the existing boundaries of location, to preserve them in health throughout the year, otherwise the settlers must restrain the increase, or endeavour to raise artificial food for their stock. Whilst nature all around presented an unlimited supply of the most wholesome nutriment, either course would seem a perverse rejection of the bounty of Providence, and the latter would certainly require more labour than could be obtained in New South Wales, or than immigration could profitably supply. Sir R. Bourke frankly acknowledged that, independent of these powerful considerations, he was unable to comply with the desire of her Majesty's government at home, "to prevent dispersion." No adequate measures could be resorted to for the general and permanent removal of intruders from waste lands, without incurring probably a greater expense than would be sufficient to extend a large share of the control and protection of government over the country which it was found desirable to occupy. It was on these principles that Sir R. Bourke had, in his despatch of 4th July, 1834, to his Majesty's secretary of state, recommended the propriety of extending in a southern direction, to Twofold Bay, the limits within which, land might be acquired from the crown; but the Earl of Aberdeen, then his Majesty's secretary of state for the colonies, in a despatch, dated 25th December, 1834, did not agree with Sir R. Bourke: his lordship said—"His Majesty's government are not prepared to authorise a measure, the consequences of which would be to spread over a still further extent of territory a population which it was the object of the land regulations to concentrate." This intimation, evidently based on the theory which, in practical working, has been a chief cause of the distress, and fluctuation in the value of property in Australia, compelled Sir R. Bourke to check, as far as possible, the herd and sheep-owners turning "squatters," and naturally seeking for their expanding flocks fresh pastures. His excellency, therefore, could afford no encouragement to a Mr. James Atkinson, who proposed to form a settlement at Twofold Bay, by means of immigrants from the north of Ireland. But, on visiting Twofold Bay, Sir R. Bourke found the greater part

of the vast tract of fertile land lying between the country of St. Vincent and Twofold Bay, depastured by flocks and herds, attended by shepherds and stockmen, the pastures already contributing largely to the wealth of the colony of New South Wales, and exceeding, in importance, many of the districts where land was then (1834–5) disposable by sale or on lease. Many considerations rendered the governor unwilling to oppose the settlement of Twofold Bay in 1834, and now, in October, 1835, induced him to intimate to his Majesty's secretary of state, that "it would be more desirable to impose reasonable conditions on Mr. Batman and his associates, than to insist on their abandoning their undertaking." His excellency therefore proposed, in this despatch of 10th October, 1835, that a township be marked, both at Twofold Bay and in some eligible spot on the coast to which Mr. Batman's party had proceeded. The town allotments, and a portion of the adjoining territory, might then be declared open to location, according to the existing regulations; and purchasers of land would probably soon be found. Finally, his excellency remarked, that dispersion would go on notwithstanding discouragement, and would be accompanied by much evil that might be prevented by the guidance and control of authority opportunely introduced; and his Majesty's government ought not to delay taking some measure in assertion of the rights of the crown over these lands.

The conclusive reasoning of Sir R. Bourke seems to have produced an excellent effect on Lord Glenelg, then his Majesty's secretary of state for the colonies, who had also been addressed, on the 26th January, 1836, by Mr. George Mercer, of Edinburgh, as shareholder in and agent for the "Geelong and Dutigalla Association," who urged a crown grant of the territories purchased by Batman and Swanston, at Port Phillip, being conceded to them. Lord Glenelg, in a despatch to Sir R. Bourke, dated Downing-street, 13th April, 1836, admitted that there were physical impediments in Australia to the close concentration of the inhabitants (contemplated by the land regulations of 1831), with which it would be futile to contend by human laws, and that the principle of counteracting dispersion, when reduced to practice, must unavoidably be narrowed within the limits which the physical peculiarities of a colony dictate and require. New South Wales, he added, was marked by nature for a pastoral country; the age of manufacturing industry was of course remote; and the quality of the soil inevitably separated the shepherds and herdsmen, and all their associates in labour, very widely from the general seat of government, and from each other. It was therefore wholly vain to expect that any positive laws, especially those of a very young and thinly peopled country, would be energetic enough to repress the spirit of adventure and speculation in which the unauthorised settlement at Port Phillip had originated. Lord Glenelg therefore expressed his general concurrence in the views entertained by Sir R. Bourke, and sanctioned his acting on them in the manner proposed. In concluding his despatch, Lord Glenelg, with his wonted candour, thus expressed the enlarged views, a consideration of which had influenced him in arriving at his present decision:—

"The motives which are urging mankind, especially in these days of general peace and increasing population, to break through the restraints which would forbid their settling themselves and their families in such situations, are too strong to be encountered with effect by ordinary means. To engage in such a struggle would be wholly irrational. All that remains for the government in such circumstances, is to assume the guidance and direction of enterprises, which, though it cannot prevent or retard, it may yet conduct to happy results. It may indeed admit of serious doubt, whether the settlers at Port Phillip and Twofold Bay have not, in reality, given birth to undertakings which deliberate reflection would have recommended rather than discouraged. Each of those places will probably, at a time more or less distant, form the nucleus of a new and flourishing settlement, interchanging with the districts at present occupied in the vicinity of Sydney many articles of internal commerce, and contributing to expedite the general occupation, by the people of this kingdom or their descendants, of those vast territories in which our national wealth and industry have already, in the last half century, converted an unproductive waste into two great and flourishing provinces. In producing and multiplying such results as these, it has, I believe, always occurred, and is perhaps inevitable, that the sanguine ardour of private speculation should quicken and anticipate the more cautious movements of the government."

While the local and home governments were engaged in considering the fittest course to be pursued, a stream of colonists was pouring into Port Phillip, and several copartneries or associations were formed. The Port Phillip Association merged into the *Derwent Company*; a *Clyde Company*, promoted chiefly by captain Wood, occupied the fine pastures around the site of the present town of Geelong; about the middle of 1836, one year after the first location, 35,000 sheep had arrived from Van Diemen's

Land and pastoral stations spread over the plains around the Salt Water river, the Weirribee, the Barwon, and the Leigh. The settlers being at a remote distance from each other, and occasionally in the vicinity of native tribes, had large bells at their stations for sounding an alarm when in want of aid.*

In June, 1836, Mr. Stewart, a magistrate, arrived at Port Phillip, as the representative of her Majesty's government: he had been despatched thither by Sir R. Bourke, from Sydney, with instructions to ascertain the capabilities of the place, and to proclaim the invalidity of all purchases of land from the aborigines without the previously obtained sanction of government. He found that 177 persons from Van Diemen's Land had already settled in the neighbourhood of the bay, and had brought with them live stock and other property to the amount of £110,000. At this period Messrs. Batman and Fawkner had come to a mutual understanding on their respective claims, and appointed a much-esteemed fellow-colonist (M. J. Simpson) as an umpire in all disputes.

The claims for the land purchased from the aborigines by Mr. Batman and of the Van Diemen's Land Association, with whom he co-operated, were submitted to the late Mr. Burge, Q.C., who had specially studied the subject of colonial law. The questions proposed, were:—(1.) Whether the grants obtained by the association were valid? (2.) Whether the right of the soil is, or is not, vested in the crown? (3.) Whether the crown could legally oust the Association from their possessions? Mr. Burge gave his opinion at considerable length: the substance of it was, that the grants obtained by the Association were not valid, and that as between Great Britain and its own subjects, as well as the subjects of foreign states, the right to the soil was vested in the crown, by virtue of prior discovery. Mr. Pemberton and Sir William Follett said they entirely concurred in the conclusions of Mr. Burge, as expressed in his "extremely able and elaborate opinion." This terminated the existence of the Van Diemen's Land Association, and of other companies formed for the colonization and appropriation of the lands of Australia Felix. The members of these companies were, however, allowed, in consideration of their payments to the aborigines, a remission to the extent of £7,000, of the purchase-money of whatever lands they might choose to purchase in Australia Felix from the crown.

Mr. Gellibrand, a legal practitioner of repute, and attorney-general for Van Diemen's Land, was one of the principal supporters of Mr. Batman; he proceeded to Port Phillip, in 1837, to protect the rights of the Van Diemen's Land Association, but in an excursion of exploration from Geelong towards the sources of the Barwon river, this unfortunate gentleman, with a Mr. Hesse, perished. He is said to have been murdered near the mission settlement of Buntingdale, by the aborigines; in 1839 Mr. Hawdon was shewn an European skull of highly intellectual formation, which was supposed to have been that of Mr. Gellibrand. On the back of the skull were the marks of two blows apparently inflicted by a tomahawk.

The value of the newly occupied territory had hitherto been known to few besides the settlers themselves, and even they were acquainted with little beyond the immediate neighbourhood of that portion of which they had taken possession; but after the journey from Argyle county, in New South Wales, accomplished by Messrs. Hovell and Hume, in 1824–5, favourable reports of the country became more widely circulated; to the exertions, however, of Sir Thomas Mitchell, is due the credit of establishing the route and laying open this region to settlers. In 1836 the surveyor-general having (during a journey related in a previous chapter) traced the junction of the Lachlan with the Murrumbidgee, and of the Murrumbidgee with the Murray, returned homewards along the left

* Some settlers when landing sheep at Port Phillip, perceived a man of great size, differing from the aboriginal natives, but scarcely distinguishable as a European, seated under a tree, watching the shepherds with a listless gaze. When accosted, he seemed to be roused from his lethargy, and was observed to repeat slowly the words uttered, as if memory was seeking to bring back some long-forgotten ideas. He gradually acquired the power of expressing himself in English, when it was ascertained that he had originally been a private soldier, named Buckley, and had been transported for striking his superior officer; was in the fleet sent out to Port Phillip with Colonel Collins in 1803, and, thirty-three years previous, had effected his escape when Collins landed his prisoners. Buckley had lived among the natives, and had "entirely dismissed the outward characteristic of a civilized being;" he was extremely reserved and uncommunicative in his manners. Mr. Batman took care of the unfortunate man, governor Arthur granted him a pardon, and he was appointed a constable at the new city of Melbourne; but, on expressing a reluctance to remain in the scene of his savage life, he was transferred to Hobart Town. Mr. Logan took an active interest in protecting the reclaimed man.

or southern bank of the latter river to the confluence of the Goulburn, Hovel, or Bayùnga. Sir Thomas then quitted the Murray, and in lat. 36° S., long. 144° E., struck off in a southwest direction, when he entered a country which he describes his expedition as having traversed in two directions with heavy carts, meeting no other obstruction than the softness of the soil, and in returning over flowery plains and green hills fanned by the breezes of early spring. "I named this region *Australia Felix*, the better to distinguish it from the parched deserts of the interior country, where we had wandered so unprofitably and so long."

The official reports of Sir Thomas Mitchell, confirming, as they did, the glowing accounts of the immigrants from Tasmania, increased the desire for locations at Port Phillip; large herds of cattle, and flocks of sheep were driven from the old settled districts of New South Wales, into the new region; and in April, 1837, on the arrival of Sir R. Bourke, the governor of New South Wales, to inspect the place, it was found to contain 150 horses, 2,500 horned cattle, 140,000 sheep, and 450 colonists. The town (now city) of Melbourne was laid out in the form of a parallelogram, one mile in length, by three quarters of a mile in breadth, along the banks of the Yarra Yarra river. The first land sale took place in June, 1837; as the government required gold in payment for the land, and there were but few possessed of the precious metal, the lots were then sold at from £30 to £100 per half acre. The value of these town sections rapidly increased; at a sale by auction, in 1839, three half-acre sections realised the enormous sum of £10,250—and the purchaser made money by his bargain, as he cut up the sections into several small lots, to meet the great demand for building applotments. Speculation was carried to a great height. Up to the end of 1841, government sold, chiefly by public auction, 205,748 acres of land, and realised for it no less than £394,353. In 1837, the sales of town allotments in Port Phillip district, amounted to £7,245; in 1838, to £8,746; in 1839, to £8,988; in 1840, to £79,168; in 1841, to £4,028; total, £108,177. Of these sums, £4,576 were for town lots in Geelong, £11,026 for ditto in Portland, £7,638 for ditto in Williamstown, and the remainder for Melbourne. The country and suburban lands in the Port Phillip district, previous to the introduction of the uniform price system, from 12th September, 1838, to 15th October, 1840, amounted to £231,526, viz.—in 1838, £25,286; in 1839, £60,964; in 1840, to October, £145,272. In 1839 sheep sold at £3 to £3 10s. each, cattle at £12 to £15, and ordinary saddle horses for upwards of £100 each. Flour rose to £80 and even £100 per ton of 2,000 lbs. weight, the common four lb. loaf was sold for 3s. 6d.* Ten shillings a day was no unusual remuneration for the ordinary descriptions of labour, and cottages of four rooms, with very moderate pretensions to appearance or accommodation, were let at an annual rent of £150 to £200. Vessels hastened to "Australia Felix" from every quarter of the globe, and at the port of Melbourne, less than three years after the foundation of the colony, 130 vessels were seen at anchor in one day.

It was about this period, I believe, that Sir G. Gipps, then governor of New South Wales, informed her Majesty's government that the road to Melbourne might be tracked for miles by champagne bottles; and there is a story of two bullock-drivers who, at a country "public house," on their way to Melbourne, called for a dozen of champagne, emptied the bottles into a bucket, and then deliberately commenced drinking the frothing wine from tin panikins.

Such a state of things could not last; in 1841 the reaction commenced, increased in 1842, and in 1843, sheep which but four years previous had been bought at £3, were sold for 1*s.* 6*d.* Cattle fell from £12 to 12*s.* each, and other things in proportion. The insolvencies were all but universal. At Melbourne there were in 1842, 113; in 1843, 124; in 1844, 45. Total, 282. The colony sustained during this commercial crisis great destruction of property; it is now recovering. Port Phillip, or Victoria, at present contains a population of nearly 50,000, and its live stock in 1849 consisted of 17,000 horses; 400,000 horned cattle; 5,200,000 sheep; and about 6,000 swine.

In 1839, her Majesty's government created the Port Phillip district a dependency of New South Wales, and appointed Charles Joseph La Trobe, Esq., superintendent, or lieutenant-governor of the same, under the directions of the governor of New South Wales. The authority of the superintendent was generally exercised more in *surveillance* than command, for he stood in the same

* Westgarth's *Australia Felix*, p. 177.

relation to the governor of Sydney as the latter stands with respect to the secretary of state for the colonies. The supervision of the departments of the treasury, survey, customs, post office, sheriff, and clerk of the crown, were ordered to be exercised through the chief functionaries at Sydney; but the judicial, marine, police, and protectorate of aborigines, were independent of the authorities at Sydney. Separate statistics were ordered to be kept, as far as possible, of the Port Phillip district, and in the previous book on New South Wales, the returns of the two divisions of the province will be found combined or separate. The Port Phillip district was authorised to send six representatives to the Legislative Council at Sydney. As the population and wealth of Melbourne and the surrounding country increased, the colonists objected to the district continuing longer associated with New South Wales; they sought the control of their own local affairs, petitioned the home authorities for a separation from the Sydney district, sent home an active and intelligent gentleman (Mr. Cunningham) to represent their views to her Majesty's government, and finally refused to send representatives to the Legislative Council at Sydney, alleging that they could not find independent and properly qualified persons to travel a distance of 600 miles, and reside at Sydney for six months in the year, in order to give attention to the affairs of the Port Phillip district. Desirous of marking the impossibility of continuing the existing state of things, the electors at Melbourne elected Earl Grey, her Majesty's secretary for the colonies, as their representative for the New South Wales Legislative Council. This does not appear to have been done from any feeling derogatory to the noble lord, but simply to show their inability to obtain any fitting representative on the spot. The secretary of state (see page 550) complied with the urgent request of the colonists of Port Phillip, and an order in council, as previously stated (page 554), decided on the erection of the Port Phillip district into a separate colony, to be called after our gracious sovereign *Victoria*, and to be ruled by a governor, aided by a Legislative Council, partly nominated by the crown, and partly elected by the colonists, the proportion being one-third nominees to two-thirds elected representatives. Such are the provisions of the bill now before Parliament.

CHAPTER II.

BOUNDARIES—AREA—PHYSICAL ASPECT—MOUNTAINS—RIVERS—LAKES—HARBOURS—COUNTIES—TOWNS—GEOLOGY—MINERALOGY—SOIL AND CLIMATE.

The north-east limits of Victoria are defined by a line bearing north-west from Cape Howe to one of the branches of the Murray river, which divides the province from Auckland county and Maneroo Plains, in New South Wales; the *northern* boundary is formed by the Murray river to the frontier of South Australia, in the meridian of 141° E.; the *western* by a line bearing south to the Pacific Ocean, along the South Australian frontier; and the *southern* by Bass's strait, which separates Van Diemen's island or Tasmania from Australia. The length of the province from east to west is about 500 miles, the breadth from north to south about 250 miles, the coast line about 600 miles, and the area about 80,000 square miles = 51,200,000 acres, it is therefore about equal in size to Great Britain.

Physical Aspect.—The province throughout its whole extent presents great diversity of feature, from the lofty alpine region on the east, to the low grassy plains in which it terminates on the west; while its coast line, indented in some parts by picturesque bays and capacious havens, is in others monotonous in the extreme, a long tract extending between Cape Howe and Lake King, called by the colonists the "Ninety Mile Beach," being almost unbroken by inlet or cove. But the peculiar characteristic of Victoria is the large proportion of fertile, accessible, and comparatively level ground comprised within its limits, not-

withstanding the mountain chains and ridges of various extent and considerable elevation by which it is traversed. The whole territory is, generally speaking, well watered. The Murray, which rises in the Australian Alps, receives in its course various other rivers which flow over extensive plains in directions nearly parallel to its own, and thus irrigate and fertilize a great extent of rich land.

Hills of moderate elevation occupy the central country, being thinly or partially wooded and covered with the richest pasturage. The lower country, both on the northern and southern skirts of these hills, is chiefly open; and on the south undulates slightly towards the coast. The grassy plains which extend northward from these thinly wooded hills to the banks of the Murray, are chequered by the channels of many streams falling from them, and by the more permanent and extensive waters of deep lagoons, which are numerous on the face of these plains, "as if," says Sir Thomas Mitchell, "intended by a bounteous providence to correct the deficiencies of a climate otherwise too dry for an industrious and increasing people, by preserving in these abundant reservoirs the surplus waters of the large river; and indeed a finer country for cattle stations than this can scarcely be imagined."

In the western portion small rivers radiate from the Grampians, an elevated and isolated mass, presenting no impediment to a free communication through the fine country around its base. Hence the enormous labour necessary in order to obtain access to some parts, and for crossing continuous ranges to reach others, by passes like those so essential to the prosperity of New South Wales, may be in great measure dispensed with in Victoria. Towards the sea-coast on the south, and adjacent to the open downs between the Grampians and Port Phillip, there is a low tract of very rich black soil, apparently the best imaginable for the cultivation of grain in such a climate.*

Mountains. — The principal chain of mountains in Victoria, designated by Mitchell the *Australian Alps*, but known also as the great Warragong chain, or Snowy mountains, are a continuation of the dividing range (see p. 433) whose progress as far as Mount Kosciusko has already been delineated. Commencing from that point, and continuing the description on the authority of Count Strzelecki, we find the chain resuming a south-west direction, and still maintaining a bold though less elevated outline. Its intricate branchings on either side, with their peaked summits, render the country rugged and sterile, excepting the neighbourhood of Lake Omeo, and a part of the Mitta Mitta valley, lying between the spur crowned by Mount Yabbara, and that surmounted by Mount Ajuk, a tract resembling a vast basin, without trees, and scantily supplied with water, but covered, even during a parching summer, with luxurious pasture. The whole region westward of the chain, towards Western Port, is rent by narrow gullies, rendered well-nigh inaccessible, either by the steepness of the ridges by which they are flanked or the thickly interwoven underwood. Eastward of the chain, in the direction of Corner Inlet, the country presents very different features. In 37° S. lat., or about the sources of the river Thomson, the spurs are less ramified, and of considerable height and length, shaping the intermediate ground into beautiful slopes and valleys, which ultimately resolve into an open and well-watered plain, clothed with nutritious grasses, adorned with fine timber, and offering charming sites for farms or country residences. The spur which bounds the southern limit of that area, and another, which, on the western side of the chain, studs the territory of Australia Felix, and the neighbouring district of Western Port, with some remarkable eminences, again change the face of the country, and constitute a broken inhospitable region, frequently unsupplied with water, and almost always ill furnished with either quadrupeds or birds.

In the vicinity of *Coroner Inlet* (Gipp's Land), the chain of mountains dips under a low and marshy ground, above which its crest appears rising only at intervals. Ten miles beyond, it is seen again, erect, jutting out boldly into the sea, and exposing its granitic flanks for a length of thirty miles to the lash of the infuriated surf.

At *Wilson's Promontory*, the sea interferes with the visible continuity of the range, but does not terminate its course, which in clear weather may be traced from the headland by the chain of islands in Bass's Straits. These islands, whether high and crowned with peaks, or low and crested only by the white sparkling foam of the sea, appear, in their winding and lengthened array, like the glittering snow-capped domes of the

* Mitchell's *Expeditions into Australia.*

Andes, when seen above the dense clouds which encompass their lower region.* The Australian Alps cover an area of about 7,000 square miles.

The *Grampians* form the leading features of the country westward of Port Phillip—they are a lofty and extensive mass comprising three ranges, and covering a surface which extends latitudinally fifty-four miles, and longitudinally twenty miles. The extreme eastern and highest summit is Mount William, in height 4,500 feet above the sea. The most northern point is Mount Zero, in 36° 52′ 3″ S. lat. The most southern, Mount Sturgeon, in 37° 38′ S. lat., rises 1,070 feet above the level of the plain, from which it springs like a perpendicular rock from the midst of the ocean. The most northern and elevated range extends from *Mount William* to *Mount Zero*, and is steepest on the northern side. From this hill the two other ranges branch off to the south, the western being named by Mitchell the *Victoria range*, and the eastern the *Serra*, from its serrated outline. On the slopes of the northern range are some forests of fine timber, but, in general, the higher summits are bare and rocky. Mount Abrupt, the south-eastern extremity of the Grampians, is 1,700 feet in perpendicular height; it contains a crater of 446 feet in breadth, the average depth being eighty feet. Mitchell describes the prospect he beheld from the summit as a truly sublime scene, the whole of the mountains quite clear of clouds, the grand outline of the more distant masses blending with the sky, and forming a blue and purple background for the numerous peaks of the range on which he stood, and which consisted of sharp cones and perpendicular cliffs foreshortened, so as to form one feature only of the extensive landscape, but composing a crescent nearly thirty miles in extent; this range being but a branch from the more lofty masses of Mount William, which crowned the whole. The view includes a vast extent of open plains fringed with forests, and embellished with lakes. "Certainly," says Sir Thomas, with an enthusiasm very natural under the circumstances, "a land more favourable for colonization could not be found. Flocks might be turned out upon its hills, or the plough at once set agoing in the plains. No primeval forests require to be first rooted out here, although there was enough of wood for all purposes of utility, and adorning the country just as much as eye could wish."† Mount Arapiles lies to the north-west of Mount Zero. This mass, the western extremity of which has somewhat the appearance of a ruined fortress, consists of a sandstone passing into quartz. It occupies an area of about two square miles, and may be easily recognised, both by its isolated position, and by its small companion, the Mitre rock, situated midway between it and the lake to the northward, named Mitre lake. The highest summit of Mount Arapiles is 726 feet above Mitre lake.

Thirty or forty miles to the eastward of the Grampians is a granitic range called the *Pyrenees*, thinly wooded with very lofty timber, and grassy to their summits; they terminate, to the southward, in Mount Cole.

About fifty miles to the eastward of the Pyrenees is a range called the *Bunninyong, or Brisbane range*, running north and south, and traversing nearly a degree of latitude.

The *Mount Macedon range* commences about thirty-five miles north-north-west of Melbourne. Mount Macedon, properly so called, is one of the principal mountains in the province, clothed with trees (chiefly black butt and blue gum eucalypti), measuring from six to eight feet in diameter to its very summit, about 3,000 feet high, which is spacious, easily accessible, even on horseback, and covered, towards the south, with the tree-fern, musk, and other plants found at the Illawarra, New South Wales. Mounts Campbell and Byng are two conspicuous eminences to the northward, which, with Mount Macedon, form the figure of a triangle—the latter being the apex, the former marking the extreme points of the base line to the north-east and north-west.

Mount Hope (considerably to the north of Mount Byng) belongs to a group of low granitic hills, of which it forms the western extremity. It is composed of immense blocks of granite, and obtained its name from Sir Thomas Mitchell, who after several months spent in traversing the dead levels of the interior, hoped from its summit to obtain an extensive view of the region between him and the coast. How much the prospect exceeded his highest expectations, may be readily conceived, for the fair and fertile region he then beheld, was that which he afterwards designated Australia Felix. *Pyramid hill*, about six miles from Mount Hope, rises about 300 feet above the plain, in the form of a tri-

* Strzelecki's *New South Wales.*

† *Expeditions into Australia.*

angular pyramid, and being quite isolated, closely resembles the monuments of Egypt. Its apex is formed by a single block of granite. To the northward of Portland bay (in the county of Normanby) a range of inconsiderable extent and elevation, called the *Rifle Range*, is chiefly characterised by its lofty timber and numerous swamps. Along the coast, to the eastward of Cape Otway, is a range called the *Marrack hills*, of which comparatively little is known, from the impenetrable character of its luxuriant vegetation. *Station peak*, the highest point of the Villemanata range, is a well known landmark in the harbours of Port Phillip and Geelong. The mountain is accessible on every side, and is remarkable for its picturesque beauty.* Besides the chains above mentioned, there are *Strzelecki range* in Bass county, Western Port district, the *Mamaloid hills*, and other groups and detached mountains alluded to in the geological section. The prevailing line of the mountain ranges, when viewed at a distance, is a deep grey; on a nearer approach every variety of hue is agreeably blended.

Rivers.—The streams which irrigate Victoria are generally deeper and more constant in their course, than those of the older colony, unless, indeed, we except the more recently discovered streams in the northern districts of New South Wales. The noble river which forms three parts of the eastern and northern boundaries of the province, is known as the *Hume* in the early part of its course, after receiving the waters of the Ovens and the Goulburn, the Campaspé, the Loddon, and various smaller tributaries, it pursues a north-easterly course to its junction with the Murrumbidgee, from which point to its sea mouth, Lake Alexandrina, in South Australia, it is called the *Murray*.† The earlier portion of its course is that with which we are at present concerned, and to avoid the repetition of the two names—Murray or Hume—it may be well to speak of it, during this portion of its course, by the latter appellation only. The basins of the Hume lie in the deepest recesses of the Australian Alps, and its immediate tributaries having also their sources among the *Snowy mountains*, it is supplied from them with never-failing streams, and enabled to support a continuous volume, whose strength is manifested by its having forced a channel through a portion of the desert interior, instead of spreading over extensive plains, or being lost among morasses, like several other northern streams. I have, I believe, elsewhere quoted the remark of Sir Thomas Mitchell, that "each Australian river seems to have some peculiar character, sustained with remarkable uniformity throughout the whole course." That of the Hume appears to consist chiefly in the vast extent of alluvial margin, the lofty trees, and still lakes, which form its leading features throughout the varied scenery of the extensive regions which it fertilizes and adorns. It has been crossed, at different seasons and places, by Hovell, Hume, Sturt, Mitchell, Hawdon, and Strzelecki, and to the latter explorer we owe the knowledge of its sources. It is worthy of notice, that the Hume receives no tributaries from the westward or the northward. The first junction of any importance, is formed by the *Mitta Mitta River*, itself the recipient of *Tallargetta* and *Livingstone* creeks; some forty miles further, a small stream named the *Kewa* joins the main channel. About the same distance beyond, is a low granite hill named Mount Ochtertyre. Near this point Sir Thomas Mitchell describes the river as being bordered by so many lagoons, that he succeeded in obtaining a view of it only with great difficulty, and after nearly an hour's ride. He found it, at length, running at the rate of two miles and-a-half an hour, and just beginning to overflow, while the opposite bank consisted of a reedy and impassable swamp.

Still, tracing the course of the Hume *from its sources*, we find it receiving the *Ovens*, another of the streams discovered during the memorable journey of Messrs. Hovell and Hume. The Ovens takes its rise in the mountainous district to the west of Lake Omeo; after its junction with the *River King*, it becomes an important stream, finely breaking up the dead levels of the surrounding plains. The next junction with the Hume is formed by a river of considerable magnitude, which has been unfortunate

* *Recent information concerning Australia Felix*, by G. Arden, Esq.

† Several writers on Australia speak of this river by the name of the Murray only, and some confusion is certainly apt to arise in the minds of readers not intimately acquainted with the subject, from its bearing different names in different places, yet this does not seem a sufficient reason for setting aside the designation given to it by its earliest discoverer. To those who agree with Dr. Lang that the Murray *is formed by* the junction of the Hume and the Murrumbidgee, the distinction is a just and even a necessary one.

in receiving a variety of names. In the maps it appears generally marked as the *Goulburn*, but there being another stream of that name in New South Wales, it is styled by some the *Hovell*, while others prefer its native, and certainly more euphonious appellation of *Bayùnga*. The river, however, by whatever name it may be designated, is a very fine stream. Rising among the mountains to the north-east of Western Port, after receiving *Broken River* and several smaller creeks, it joins the Hume in 143° E. long., 35° 19′ S. lat. About 100 miles below this point, the high road between Sydney and Melbourne intersects the river, which during that distance has a medium breadth of from sixty to seventy yards, flowing through a fertile and populous district. The Bayùnga is subject to high floods, which supply extensive lagoons much frequented by aquatic birds. Sir Thomas Mitchell, in recounting his expedition of 1836, describes it as having a breadth of sixty yards, with a firm bed and banks; its mean depth (near the Deegay ponds) being somewhat more than two fathoms, and its velocity about one mile and 240 yards an hour. The length of its course is, according to Lang, about 200 miles, but it is elsewhere stated at above 400 miles. The land, up to its sources, is occupied by squatters, but near its mouth it is less settled, the soil being considered of inferior quality.

The *Campaspé* falls into the Hume about four miles above the junction of the Goulburn or Bayùnga. It rises near Mount Macedon, and is joined at an early period of its course by the *Barnard* or *Coliban*,* a stream remarkable for the bold character of its scenery, and the abrupt and steep ravines through which it flows, the left bank consisting of undulating hills and lofty rocks of granite, the right strangely contrasting with it, by the perfectly level summits of the adjacent hills, which give to the whole the appearance of having been, at one time, in a fluid state. Some of these table hills are separated by dry grassy vales of excellent soil. Further back, the rugged crests of a wooded range of a different formation, render the level character of this ancient lava or vesicular trap more obvious. The rocky channel of the Barnard forms in one part a very striking cataract, the waters having a perceptible descent of above sixty feet, but they fall in reality more than double that height; in the lower part, however, the stream escapes unseen among large blocks of granite. The picturesque effect of the waterfall of Cobaw is attributable less to the body of water falling, or the loud noise, than to the bold character and harmonious grouping of the rocks over and amongst which it falls. The prevailing shades are light red and purple-grey, the rocks being finely interlaced with a small-leaved creeper of the brightest green; a dark-coloured moss relieves the vivid hues; while a brilliant iris, shining steadily amid the spray, blends into perfect harmony the lighter colour of the rocks, and the whiteness of the torrent rushing over them.†

Loddon River, called the *Yarrayne* by Mitchell, from the noble line of Yarra trees growing on the very brink of the stream, next joins the Hume, and waters in its course a large extent of fine country, between that river and the western side of the Mount Bunninyong range, where it has its origin. This stream has all the characteristics of a mountain torrent, being at some times (as when discovered, in 1836) of considerable importance, with an equal depth of about nine feet, and a current of nearly a mile and-a-half an hour, while at others it is little better than a rivulet. The next important junction with the Hume is formed by the Murrumbidgee, and has already been described in the account of the latter river (p. 444); and of the former, little more need here be said. Throughout that portion of its course which we have just traced, the Hume, or Murray, maintains the character of a deep and rapid stream, exceeding at some points 400 yards in breadth, and offering a valuable means of internal communication. According to Mitchell, it carries to the sea a body of fresh water sufficient to irrigate the whole country; which is in general so level, even to a great distance from the river banks, that the abundant waters might probably be turned into canals, for the purpose of supplying natural deficiencies of water at particular places, or of affording the means of transport across the wide plains. The numerous and extensive grassy flats which border the river are attended, however, with one great disadvantage—the banks being frequently so steep and yielding as to render the water inaccessible to cattle, who appear to shrink instinctively from the muddy margin.

* According to Mr. Ham's map of Australia Felix (1849), the Barnard or Coliban joins a channel by which the Loddon and Campaspé anastamose

† See Mitchell's *Expeditions into Australia.*

The *Yarra Yarra*, though in itself secondary in importance to several other rivers of Victoria, all of which are, however, very inferior to the noble stream whose course through this province we have just examined, nevertheless claims attention, since on its banks stands the fair city of Melbourne. The Yarra Yarra rises in a gully between the Snowy mountains and one of the Goulburn mountains, about 100 miles east-north-east, as the crow flies, from Port Phillip, in 37° 46′ S. lat., 146° 17′ 30″ E. long. The originating spring is so small that it could run through a four-inch pipe; it is, however, soon fed by branch streams, some of considerable magnitude, from the adjacent gullies. There are several waterfalls at the head of the stream, one rising some hundred feet above the bed of the river. The country is of trap-rock formation; freestone and slate are to be found. In various places the scenery (as described by Mr. Hoddle, who explored it in 1844) is extremely picturesque. Towards the source of the Yarra Yarra, the surface was boggy, and the scrub so close that the explorers could only cut their way through it at the rate of half a mile a day. Farther down, the soil was good, but very heavily timbered, many of the white gum-trees measuring fifty feet in circumference, and 150 feet in height; the tree-ferns were more than twenty feet high; and the sassafras and myrtle grew luxuriantly. The "greenest of trees" occasionally varied the scene; box, stringy bark, sometimes iron bark, black and silver wattle, and honeysuckle, studded portions of the country. One very pretty shrub abounded; it had smooth leaves, and produced, in bunches, a seed resembling black pepper in appearance and taste. Two other trees were also noticed, the fruit of which might be mistaken for the coffee-berry and plum. No aborigines were met with in the course of the expedition, which occupied nearly four months. This river disembogues in Hobson's bay, the northern extremity of Port Phillip; it is navigable up to Melbourne for steam-boats and other vessels of light draught, by a tortuous course of seven miles. The bar at its mouth has nine feet water at high tide. At the distance of four miles from Melbourne in a direct line, although perhaps three times that distance by the windings of the river, the Yarra Yarra receives, as a tributary from the northward, the *Merri creek*: at four or five miles farther, it receives the *Darebin creek*; and at six beyond the latter stream, the *River Plenty*. These are all mountain torrents, rising in Mount Macedon range. There is much good land on their banks, although in general pretty heavily wooded and thickly covered with rocks, which are all evidently of volcanic origin, and have been carried down by the torrents from the extinct volcanoes of that part of the territory. The soil is a rich black mould, well adapted for the growth of the vine and other descriptions of European fruit-trees. There are many small farms, in this part of the country, in a highly creditable state of cultivation; and the situation of some of the villas, both on the main river and on its tributary streams or creeks, is romantic and beautiful in the highest degree.*

A very interesting account of the lower course of this river is given in an official document written by his Honour C. J. Latrobe, the Superintendent of Port Phillip. The source of the river had not then been ascertained, although the Superintendent rightly surmised that it would be found "among the offsets of the Snowy Alps to the eastward." Up to the furthest point to which it had then been surveyed it presents pretty much the uniform character of a constantly flowing stream, from a chain-and-a-half to two chains in breadth, and eight or ten feet in depth, sunk in ordinary seasons beneath abrupt and wooded banks. As it approaches the vicinity of Melbourne and its estuary, it is traversed by dykes of trap or ironstone, the most elevated and striking of which occurs at the head of the basin at Melbourne. At this point, in ordinary times of the tide, the fresh water mingles with that of the bay, which, following the lower bends of the river, is nine miles distant. In dry seasons, before the dam was built, the high tide would frequently pass this natural barrier, and flow strongly up the channel, its influence being felt for hours to the distance of perhaps a mile above the town.

Below the point where the river Plenty enters the Yarra Yarra, the high banks of the latter are found to border occasional flats, or low undulating tracts of various extent, composed of very rich alluvial soil; in the other portions of its course from the above point, the river will be seen to be confined within its deep bed at the foot of steep sandstone hills, or somewhat elevated flats of honeycomb land, sprinkled with trap boulders. The valley

* Lang's *Phillip's Land.*

of the Yarra Yarra, properly so called, may be said to terminate at Melbourne. At this point the bluff land retires on either hand and gives place to a wide tract of country, composed partly of low marsh, but very slightly raised above the level of the high tides, and partly of low undulating sandy rises, through which the Yarra Yarra and Salt-Water river take their course to their junction with the ocean. From the whole of this level the sea has doubtless retired, leaving the original coast line exceedingly well defined in the steep scarped banks which bound the low land for many miles.

The Yarra Yarra is subject to occasional heavy floods, which have occurred at every season of the year, in the height of summer and the depth of winter, as well as in the spring. That of 1844 was a very serious one. The river had been swollen by the usual equinoctial rains above its ordinary height, for some days previous to the night of the 2nd October, but it then rose for a few hours with a rapidity so unexpected, and with such short warning, that even after the flood had gained the opening below the hills, and consequently found room for its extension, the water rose so high, and poured down towards the bay with great rapidity, and in such a volume, that it was with difficulty that the people inhabiting the river banks a mile below the basin could be withdrawn from danger. Up the river, above and below Heidelberg (a village about seven miles from Melbourne), where there are many rich alluvial flats, the stream appears to have overflowed its high banks and covered the low cultivated ground on every side to the depth of ten, fifteen, or even twenty feet. In parts where it was shut in by the hills on either side, it flowed on with great velocity with a mean height of thirty feet and upwards above the ordinary level; and reaching the more open country in the vicinity of and below the town rose in the bed of the river to seven or eight feet above the usual level, and in the course of a few hours covered the whole of the lower ground to the foot of the bluffs in every direction to a mean depth of two or three feet. A simultaneous rise in the tides, caused mainly by the strong southerly gales, converted the whole of the lower country, from Melbourne to the *Salt-Water River*, into a wide lake.

The *Marriburnong*, or *Salt-Water River*, has its sources in the mountains south of Mount Macedon; it is fed by *Deep creek* and others, and joins the Yarra Yarra four miles above its embouche in Hobson's Bay.

Barwon river, on whose northern bank the town of Geelong is built, rises in the high barren ranges near Cape Otway; waters, in its circuitous course of upwards of 100 miles, a splendid tract of country, and empties itself into the ocean by Lake Conewarre, a few miles to the westward of the entrance of Port Phillip. The mouth of the Barwon is only navigable for boats entering in very fine weather. The Barwon, near the foot of some low hills called by the natives Barabool, falls some height over a rocky shelf, forming a pretty waterfall, and at a little distance may be found meandering silently between grassy flats. A few miles to the south-east of Barabool hills the river communicates with a large lagoon; "after which," says Captain Stokes, "I was informed there was only a depth of three feet, and a width of one-eighth of a mile. The Barwon is therefore not available for water carriage to the town of Geelong, even if its entrance were better protected."

Moorabool River rises in the Boninyong or Brisbane range, and joins the Barwon at Geelong. There is much good land on the Moorabool, both towards its source and towards its mouth. The declivities of the valley of this river, as also the singular sloping treeless sides of the Barabool hills, are described as appearing to have just emerged from the sea, which had, as it were, scooped out their hollows and smoothed their sides."*

Native creek also joins the Barwon from the northward, with which another more important junction is soon after made on the same bank by the *River Leigh*. This stream rises to the north of Mount Boninyong, and divides the county of Grant from the Portland Bay district.

Glenelg River issues from a gorge on the western slope of the northern Grampians, and pursues a due westerly course for about fifty miles, to within twenty-five miles of the western limit of the province. It then takes a southerly bend, entering the territory of South Australia a few miles from the ocean, but, quickly recrossing the boundary line, disembogues a mile or two to the eastward of it in the deepest part of Discovery bay, 38° 2′ 58″ S. lat., 141° 2′ 9″ E. long. Mr. Tyers states that the mouth of the Glenelg cannot be made available as a harbour; for independently of the heavy breakers on the bar, the accumulation of sand is sometimes

* *Discoveries in Australia*, by Captain Stokes, R.N.

so great between the eastern and western shores of the entrance as completely to separate the river from the sea; and moreover the basin, through which it flows immediately before its entrance into the ocean, has a depth of not more than two or three feet water. Beyond the basin the river appears to be of considerable depth, but the banks are chiefly limestone cliffs, for the most part about 100 or 200 feet high, and steep; the water is brackish for several miles, and the land indifferent, being a mere sand, covered with thick scrub, vines, and forest.* Higher up on the Glenelg, the country is of a very different description. Sir Thomas Mitchell, who came upon this river at an earlier portion of its course, speaks in the highest terms of the "beauty and substantial value" of the adjacent country. "It seems," he says, "that the land was everywhere alike good, alike beautiful; all parts were verdant, whether on the finely varied hills, or in the equally romantic vales, which seemed to open in endless succession on both banks of the river." In 37° 30′ S. lat. the Glenelg receives the *Wando*, a tributary from the eastward; farther south, in about 37° 40′ S. lat., it is joined by the *Wannon*. This latter stream rises on the eastern slope of the Grampians, then winding round the southern extremity of the mountain range, strikes off towards the fine country on the westward, and after receiving several tributaries from the southern and western Grampians, is joined by the *Grange Burn*, forty miles to the westward and at length, about twenty miles farther west, falls into the Glenelg some forty miles inland from the mouth of the latter river. Between the junction of the Wannon and the sea, two small streams, named the *Crawford* and the *Stokes*, flow into the Glenelg from the eastward.

Leaving the Glenelg, we may in noticing the chief streams of Victoria (not already mentioned), which have their embouche in the ocean, trace also the leading features of the coast-line proceeding in an easterly direction to Cape Howe.

Discovery Bay is a long open indentation of the coast, and affords no shelter to shipping beyond that of a mere roadstead. Cape Bridgewater, its eastern extremity, is a hummocky cliffy-faced point of land, separated from the main by a low neck. Four miles to the north of this point are some caves from forty to fifty feet high, and of the same depth; the ceilings were encrusted with stalactites, and the entrances overlooked some pretty fresh-water lakes, three miles in extent, separated from the sea by a narrow chain of sand hills. *Cape Nelson*, the southernmost point of the promontory, which shelters Portland bay on the eastward, is in 38° 24′ 15″ S. lat., and 141° 34′ 15″ E. long.

Portland Bay extends twenty-six miles from east to west, and ten from north to south. The most northern portion of its shore is comparatively low, but the western portion consists of bold cliffs rising to the height of 180 feet. There is excellent holding ground (mud with a coating of sand) in from four to seven fathoms, towards the western shore, where the anchorage is completely sheltered from the south-westerly winds, but exposed however to those from the south-east, which prevail during the summer months. Two small rocky islets, called *Lawrence Isles*, lie off the point forming the south side of the bay, and a much larger one named *Lady Julia Percy's Isle* (known among the whalers as Julian Island) lies off its eastern shore.

The rivers which fall into Portland bay are — the *Surry*, which disembogues in 38° 15′ 43″ S. lat., and about 141° 56″ E. long.; the *Fitzroy*, a more important stream, with much good land on its banks; and the *Shaw* and *Eumerella*, which unite immediately above their junction with the ocean. The channels of both these streams are merged, for a time, in extensive swamps.

Moyn River next falls into the sea at *Port Fairy*, a small and not very secure harbour (38° 22′ S. lat., 142° 16′ E. long.), chiefly valued as a whaling station. The entrance is open, and affords but insufficient shelter for the anchorage; during the winter, however, which is the calving season of the whales, the prevailing winds come off the land. The town of Belfast is built on the shore of this bay, at the mouth of the Moyn.

Lady or *Merri Bay*, about twenty miles east of Port Fairy, is mentioned by Dr. Lang as a small but superior harbour, but other writers appear to consider it merely an open roadstead. It receives the *Merri* and *Hopkins rivers*; the former of these is a small and unimportant stream; the latter rises near Mount Cole, in a range sometimes called by the same name as the river, on the south-western face of the Australian Pyrenees, thence it pursues a southerly

* *Report of an Expedition to ascertain the position of the 141st degree of east longitude, &c.* By C. J. Tyers, surveyor. Colonial Government paper. Sydney: 1841.

course of at least ninety miles, and falls into the sea at the town of Warnambool. Both banks of the Hopkins* are occupied by squatters the whole way down, the country being of excellent quality. The land, towards the upper part of its course, is best adapted for pastoral, and that on the lower portion, for agricultural pursuits. The Hopkins receives several tributaries. About ten miles from the coast, *Taylor's River*, or the *Caranbalac*, falls into it over a precipice of forty feet.

The coast line between Lady or Merri bay and *Moonlight head* is little known, and its weather-beaten shores are deemed dangerous and impracticable. On the latter point the erection of a light-house is in contemplation, as also on *Cape Otway*, the southern extremity of the curved coast-line extending between the mouths of the Hopkins and the Barwon, which are 100 miles apart, or 150, following the coast-line. Mr. Smythe, who surveyed the shore for a distance of about seventy miles, namely, from fifteen miles west of Cape Otway, and fifty-five miles east of that cape, describes it as bold, —skirted by perpendicular cliffs of 500 to 1000 feet elevation above the sea, and having numerous bays, which afford excellent anchorage, and are well protected from all but due easterly winds.

King's Island, thirty-four miles from Cape Otway, forms the southern side of the western entrance to Bass Strait. The *Harbinger reef* runs about four or five miles off the northern extremity of the island; and the channel between that reef and Cape Otway is twenty-nine miles wide, with soundings of fine white sand. It is, therefore, a perfectly safe ship-channel; I beat through it in a large vessel during the night. There are soundings along the whole south coast of Australia, at a considerable distance from the land, and the current sets to the southward.

Port Phillip was discovered by Lieutenant Murray, R.N., when commanding the *Lady Nelson*, New South Wales colonial brig, in January, 1802, and was shortly after visited and surveyed by Captain Flinders, in his Majesty's ship *Investigator*. The entrance is scarcely two miles in width, but within, the port expands into a capacious haven. The heads are forty miles from the innermost anchorage, off Melbourne, situated at the north side of the bay, which has a breadth varying from twenty to sixty miles, and includes an area of not less than 875 square miles of water, capable of holding in perfect safety the largest fleet of ships that ever went to sea. The entrance is narrowed by rocks lying off *Point Nepean* (in 38° 18′ S. lat., 144° 30′ 30″ E. long.), and by shoals on the opposite headland. It is, however, deep enough to admit vessels of any size at low water, and may be safely entered at flood tide, which rises six feet. Masters unacquainted with the harbour, should not attempt to enter at night or at ebb tide. There are numerous sand-banks about the middle of the harbour, which break the force of the sea when the wind is from the south, and afford a smooth anchorage near Melbourne; the eastern passage to which, along the bay, is the deepest and safest. On the western side of Port Phillip, a branch or arm extends into the land in a west-south-west direction for about fifteen miles, and has an entrance of about six miles wide; it is called *Geelong harbour*. A small basin at its upper end communicates with the larger one by a narrow navigable channel. Geelong harbour runs nearly east and west, and there is secure anchorage at its furthest extremity.†

* The desire of offering a tribute of esteem to an old brother officer, appears in this instance to have completely triumphed over the love of appropriate names and sweet sounds, usually manifested by Sir Thomas Mitchell in the numerous instances in which the task has devolved upon him of finding designations for hill and valley, mountain and stream. Judging from his general rule, we may fairly infer that could he have ascertained the native name, he would have gladly retained it, and saved this fine stream from a patronymic which, but for the associations connected with it, would most assuredly sound in the ears of Sir Thomas himself common-place and distasteful in the extreme.

† Port Phillip is now visited by vessels from India, China, and other places, where instructions for the guidance of mariners may not be readily obtainable. One vessel from Hong-Kong was recently lost at the rather difficult entrance of this immense harbour. Commanders of ships having on board this work on the *British Colonies* would expect to find sailing directions for entering new havens, I therefore subjoin an abstract of the *Directions for Entering Port Phillip*, as laid down by Captain W. Hobson, R.N., of H.M.S. *Rattlesnake*, who made a running survey of the port. Captain Hobson says that—

"In approaching Port Phillip from the westward, the entrance cannot be distinguished until Point Nepean bears N.N.E.; then you open Shortland Bluff, and obtain a view of the Estuary. But the position of the entrance is easily determined by its situation with respect to Mount Flinders to the westward, and Arthur's Seat to the eastward. Mount Flinders is a small flat topped hill at the extremity of

The principal features, on entering the bay of Port Phillip, are *Arthur's Seat*, *Station Peak* [*Youang*], and a bluff in the north-east, called *Dandonong*. Youang is one of a small cluster of lofty peaks, rising abruptly out of a low plain on the west side of the bay. Arthur's Seat forms the north extremity of a towering range, declining gradually, on the east shore, to the coast at Cape Shanck.

Of the rivers which fall into Port Phillip, the Yarra Yarra and the Salt Water river, the Barwon and the Moorabool, have been described, and the Werribee and Little river alone remain to be noticed.

Werribee River is a small fresh-water stream, having its origin in the high range between Mounts Bonnyong and Macedon, and its embouche midway between Melbourne and Geelong. In seasons of drought (such as the summers of 1845 and 1846), it is little more than a succession of deep pools, with scarcely a perceptible current; but in winter it becomes a large and rapid river, and has been known to rise twelve feet in a single hour. At an early portion of

the low land; it makes like an island, and bears W. $\frac{1}{2}$ N. from Point Nepean. Arthur's Seat is the highest land on the coast westward of Western Port; from the southward its north-west extremity appears precipitous; it slopes to the south-east, and its summit bears E. $\frac{1}{2}$ S. from Point Nepean, which is situated on the eastern side of the entrance, at the extremity of a peninsula, which slopes gradually from the base of Arthur's Seat; at one-sixth of a mile N.W. by W. from the Point is a low rocky islet, connected with the shore by a reef, which dries at low water; even in calm weather the sea breaks on it with considerable violence. Point Lonsdale, on the western side, is a low point jutting out from a dark rocky cliff, from which a reef runs two cables' length to the eastward, and forms the southern extremity of a bay that terminates at Shortland Bluff to the northward. To enter Port Phillip a fair wind or a flood tide is indispensable; with a fair wind keep in mid channel between Point Nepean and Point Lonsdale, and steer in for Shortland Bluff until Point Nepean bears S.E. by S., then shape a course as hereafter directed for the channel through which you mean to pass; with a beating wind do not approach Point Lonsdale nearer than a quarter of a mile, and be careful to avoid a sunken rock which lies N.W. by W., two cables' length from the rocky islet off Point Nepean. The soundings across the entrance are very irregular, varying in one cast from seven to twenty-four fathoms, and again suddenly shoaling to five or six. On the edge of the reef of Point Lonsdale is a depth of five fathoms close to the rocks, and the same depth on the southern edge of the reef that extends from Point Nepean to the rocky islet. The tide in the entrance runs with considerable force in the height of the springs. From its impetuosity, and the irregularity of the bottom, a rippling is created which in rough weather would render it very unsafe for an undecked vessel to pass through, and presents to a stranger so much the appearance of breakers, that it requires good nerve to venture on. If the wind should be light, care must be taken to get into the fair way before you come too near the reefs, as the flood tide sets across them towards the entrance of the port, with great strength. As the entrance is only contracted by projecting points, with a favourable tide or a fair wind, you are soon within them, and then if you are desirous to anchor, a good berth may be found any where between Observatory Point and Point King, within half a mile of the shore, in seven fathoms, clay bottom.

"When bound through the Western Channel, take care to avoid a little shoal called the Pope's Eye, on which there is only twelve feet. The following marks will place you exactly on it. Swan Point N. 1° E. (mag.) Mount Eliza, summit on with north end of the flat island. If bound through the Western Channel, pass to the westward of Pope's Eye, by keeping Swan Point to the northward of N. $\frac{3}{4}$ E., until Shortland Bluff bears W. $\frac{1}{2}$ S., and steer for the entrance of the channel which lies between a shoal that commences two cables' length to the northward of Swan Point and the west bank, to clear the bank off Swan Point, keep Point Lonsdale just open with Shortland Bluff, until Swan Point bears N. $\frac{1}{2}$ W., the course then is N.N.E., and midchannel will be preserved by keeping Point Nepean a finger's breadth open with Swan Point; the soundings are from four fathoms at the centre, to a quarter less three at the sides, from which the banks shoal suddenly to five or six feet, and in some places dry at low water, when Station Peak is seen over the north red cliff, bearing N. 72° W., you are clear to the northward of the banks, and will be in seven fathoms water. In approaching from the northward, bring Point Nepean open with Swan Point before the north red bank bears N. 72° W., and follow the leading marks. This channel has now a buoy marking the entrance on the edge of Pope's Eye, two more on the edge of the shoals on either hand, and a fourth on the Swan Spit. In beating through, you must be guided by the eye on the eastern side when the shoals show themselves very distinctly, and take care not to shut the marks. In standing to the westward, at all times, it is advisable to keep a person aloft, whence the shoals may generally be distinguished. The tide runs from two to three knots per hour, and follows the direction of the channel. To pass through the south channel when fairly within the port, keep along the south shore, at a mile distance, in nine or ten fathoms water, until abreast of Point King, from which situation an E. by S. course, with very slight deviations, will carry you through. It is impossible to find any leading mark for a channel so long, and in some places so narrow, that is not more liable to perplex a stranger than to guide him. The only certain measures of navigating it, until regularly buoyed, is by the eye from aloft, and when the weather is too hazy to show the banks it is not safe to go through. The soundings in the south channel are very irregular, from sixteen fathoms to five, and close to the edge of the banks, from that to three, two, and one fathom. Although the deepest water is to be found in this channel, it is not to be preferred by vessels drawing less than sixteen feet water: the absence of any leading mark, and its great length, being a great objection. The harbour-master in a late government notice, has declared this passage to be impracticable, from the shifting of the sands. The south sand that commences near Point King, forms the south side of the channel, its eastern end

its course, about two miles from Ballân, the Werribee forms a wide deep basin, bounded on all sides by basaltic columns; and above this basin the stream flows over a basaltic pavement of somewhat the same character as the famous Giants' Causeway, in Ireland; but the blocks are less regularly formed.*

Little River rises to the north or north-west of a low range called the Anaki hills, and falls into Port Phillip a few miles to the southward of the Werribee. Near its sources there is some good land, but towards its mouth are extensive plains of ferruginous sandstone.

Port Phillip is divided from Western Port by a low promontory, of which the south-western extremity is *Cape Shanck*, a narrow projection of calcareous formation, immediately off which lies a rock named, from its striking resemblance, *Pulpit rock*.

Western Port, discovered by Mr. Bass, in 1798, and so named by him from its being the limit of his explorations to the westward, from Sydney, is a fine harbour, situated in a wide and deep inlet (38° 15′ S.lat., 145° 30′ E. long.), containing two great bays, the inner one being a circular basin of about eighteen miles across, with an island, called *French Island*, of about twelve miles in length and six in breadth, in its centre, which thus divides it into an eastern and a western arm. Another island, called *Phillip* or *Grant Island*, of about fifteen miles in length, stretches across the outer bay, almost from point to point, and effectually shelters the harbour, leaving a wide and well-protected ship channel on its western side, whilst on the eastern the passage is narrow, and fit only for boats and small vessels.

This harbour† presents one very curious feature, namely, a sort of canal or gut in the mud flats that front the eastern side of Grant Island. Its depth varies from six to seven fathoms; the width is half-a-mile. The chief, if not the only danger to be guarded against in Port Western, appears to be a sandbank, lying in the centre of the channel, four miles within the entrance.

Phillip Island consists of an unvaried strata of vitrified sandstone and clay. The

bears S.W. ½ S., (mag.), from the white cliff, and to the eastward of that, deep water extends close to the shore.

"The northern side of the channel is formed by the middle ground, the western end of which bears N. ⅓ E. (mag.) from Point King, and extends seven miles eastward when Station Peak is on with Indented Head bearing N.W. by W. (mag.), and White Cliff S.W. by W. ½ W., you are clear of the middle ground, and may steer to the northward. Symond's Channel may be made available in N. or N.W. winds, when unable to fetch through the western channel, but is not recommended for any but small vessels until it is buoyed. The Pinnace Channel is only suitable for small vessels, the deepest water will be found close along the edge of the great sand. To pass clear of the shoals to the northward, keep Station Peak on with the extreme of Indented Head, and do not shoal the water under nine fathoms. From the edge of the bank over the area of Port Phillip, to within a mile of the shore, there is deep water every where, with the exception of the Prince George Bank off Indented Head, and in running and beating towards Hobson's Bay, at the northern extremity of the port, there is nothing to apprehend. Steer in for Point Gellibrand and pass it at two cables' length distance, taking care in so doing not to shoal the water under five fathoms, and to anchor when you bring Point Gellibrand to bear S.S.W. in four-and-a-half fathom water; small vessels may bring it to bear south in two fathoms. A light-house is now erected on this point, which will at night direct strangers to the anchorage, independent of the lights of the town and numerous shipping. If you are bound into Geelong harbour from sea, be careful to give a berth of at least two miles from Indented Head to avoid the Prince George Bank, which extends from it in a N.E. direction. In rounding the shoal on the east and north sides do not shoal the water under seven fathoms until Point Richard bears W. by S., you may then haul up for Point Henry.

"Do not approach the northern shore nearer than one mile, and in passing Point Wilson keep Point Henry to the westward of W. by S. (mag.); one mile east, or E. by S. from Point Henry, there is tolerable good anchorage. On the bar at the head of Geelong harbour you cannot ensure more than seven feet at high water; at a cable's length within the bar there are five fathoms, and the depth may be carried close up to the shore; the rise and fall of the tide does not exceed four feet in any part of the port, and more commonly it does not rise beyond two feet six inches on the springs: both the time of high water and the extent to which it rises are greatly influenced by the wind; the force of the tide through the channels leading to the north from the mouth may be estimated at from two to three miles per hour; in the south channel it runs with less force, and in the wide expanse northward of the banks it is scarcely perceptible. When it acquires its greatest strength it is not safe for any open boat to venture out, but it is easy to conceive the rapidity with which it must run to raise the level of 875 square miles of water four feet by means of so small an embouchure."

* *Phillip's Land:* by Dr. Lang.

† In proceeding from Port Western to Port Phillip very extraordinary soundings were ascertained by Captain Stokes, in H.M.S. *Beagle*. About one-third of the way across from Grant Island to Cape Schanck, seven miles from the latter, the depth was ascertained to be *seventy fathoms*, on a gravelly bottom. The same unusual depth was likewise found by a single cast of the lead, three miles south of Cape Wollami, with the same kind of gravelly bottom, or a very fine kind of shingle. In the latter instance, there were on either side thirty-nine and thirty-three fathoms fine sand and shells. This depth is the greatest within the strait.—(See *Voyage of H.M.S. Beagle*, by Captain Stokes.)

western half of its southern side is formed by a line of cliffs, from one to three hundred feet in height. A remarkable pyramidal rock marks the point where they terminate, after which a long range of low hills, covered with scrub, stretches to *Cape Wollami*, a helmet-shaped headland, rising abruptly from the sea to the height of 480 feet. This cape, situated at the south-eastern extremity of Phillip island, is a very conspicuous object, the rest of the island, with little exception, being covered with low hills, thickly clothed with the tea-tree, scrub, and vinous plants. On the northern side of the island are several small lagoons or waterholes, situated a little distance inland, which contain pure water. The anchorage from the signal-post to Elizabeth cove affords complete shelter from south and south-west gales. The soil of *French island* is of a superior description to that of Phillip island; and on its shore is found freestone resembling the celebrated Portland stone, which rises in large perpendicular masses. The water near those cliffs is of sufficient depth for vessels of any size to anchor alongside. The upper land has for its principal trees, stringy bark, gum, and "she oak." The lowlands are impassably covered with mangrove and tea-tree.

The mainland shores of both the inner and outer bays are very rugged, and are broken in many places by the channels of small streams; of which, however, only one, *Bass River*, has received a name; and in the useful and carefully compiled map of Australia Felix, published in 1849, by Mr. Ham, there is not even this exception.

Leaving Western Port, we follow the coast line in a south-easterly direction, to Cape Patterson, a low point covered with scattered sand hillocks, which marks the commencement of a deep bight, in the centre of which a tongue of land, somewhat similar in shape and direction to that constituting the southern boundary of Port Phillip, forms a bay, or rather lagoon, called *Anderson's Inlet*, of about fifteen miles in diameter, into which the *Tarwon River* flows from the north. The wild forest country, through which this stream takes its course, is hemmed in on the north, east, and west by the Strzelecki range and its branches,—the native name is *Tangel*, and there are said to be large open plains to the north-east, abounding with game.

Cape Liptrap, in 38° 55′ S. lat., 145° 57′ E. long., marks the southern extremity of the curve in which Anderson's inlet is situated, and the commencement of another equally striking. Cape Liptrap is twenty-four miles distant from *Wilson Promontory*, and the shore receding between these two points, forms a bay nine miles deep.

We now arrive at the majestic headland which forms the southern extremity of Australia. Wilson Promontory consists of a lofty mass of hard granite, twenty miles long by six to fourteen wide, its lofty summits rising to a height of 3,000 feet, are at most seasons of the year enveloped in a cloud of grey mist. Sometimes, however, the bold outline of the mountains is relieved against a clear sky, and their highest peaks catch the first rays of the morning sun as it rises from the southern ocean. The promontory is connected with the main land by a low sandy isthmus, which is described as bearing the appearance of having only recently been left dry. Several clusters of small islands, namely, the *Glennie*, *Cleft*, *Rodondo*,* and others, lie immediately off the west and south shore of the promontory; those known as the *Hogan* group, are situated to the south-east, the largest of them (in 39° 13′ 14″ S. lat.) is about a mile-and-a-half in extent. Captain Stokes, who landed upon it in 1842, when surveying Bass Strait, found a number of dogs left by sealers, that had become quite wild, and some fur seals in a cave on the south-east point. On the north-east is a boat cove sheltered by two small islets, and provided with fresh water.

Cape Wellington, the eastern projection of Wilson Promontory, forms the north point of a wide and spacious bay, called by Captain Stokes, *Waterloo Bay*,† from H.M.S. *Beagle* having anchored there on the anni-

* A rock called Crocodile rock, in 39° 21′ 30″ S. lat., and 4° 41′ 45″ west of Sydney, lies in a line midway between the western extremities of Rodondo and Curtis islands, nearly nine miles from each. It is a smooth round-topped granite boulder, just protruding above the surface, and in fine weather the sea runs over it without breaking. The depth being forty-three fathoms close to it, if the waters of the strait were drawn off, the shape of it would be that of a column nearly 260 feet high.—*Stokes' Discoveries in Australia.*

† The following extract, quoted by Dr. Lang, from the *Port Phillip Patriot* (the date of which the doctor does not state), evidently refers to the inlet described above, on the authority of Captain Stokes, as Waterloo bay. "Lady's bay is a small securely-sheltered cove, with a depth, in many places, of from seven to eight fathoms water, on the eastern side of Wilson promontory, about four or five miles from its extremity. It was named by Captain Wishart, who discovered it, after his vessel, the *Lady of the Lake*. Lady's bay is so free from dangers that the

versary of that victory. There is no good anchorage between it and the south end of the promontory, from which it is four miles distant. The depth in the centre of Waterloo bay is twelve fathoms, muddy bottom. At its head lies the low valley three miles in length, which stretches across the promontory and forms a very conspicuous break in the high land. On the northern side of it, the lofty and wooded crest of Mount Wilson rises abruptly. On the southern is a ridge strewn over with immense boulders of granite. A rivulet winding amid the valley below, falls into the sea at the north end of a sand beach, forming the head of Waterloo bay.

Refuge Cove, to the north of Waterloo bay, is so named from being the only place a vessel can find shelter in from the eastward, on this side of the promontory. This small cove, which is only a cable wide at its entrance, may be recognised by *Kersop Peak*, which rises over the south part, and from its lying between Cape Wellington and *Horn Point*, and also from its being the first sandy beach that opens north of the former. The scenery of Refuge Cove is said to resemble that of Tierra del Fuego; and Captain Stokes states, that the smooth quiet sand beaches, the dense forests reaching to the water's edge, the mist-capped hills, and the gusts that swept down the valleys and roared through the rigging, forcibly recalled to his recollection that land of storms.

On the north side of Refuge Cove is the *Sealers' Cove* of the old charts, a small deep bay, open to the east. The trees on the south-west side are large, measuring eight feet in diameter, affording shade and moisture to tree-ferns, and an undergrowth of various kinds, and supporting on their branches a profusion of creepers which, interlacing, form a canopy resembling lattice-work.

Corner Inlet, an extensive basin, situated in the deep angle between Wilson promontory and the main land, has a bar extending off it six miles from the entrance, on which there is water for vessels drawing from sixteen to eighteen feet. Captain Stokes speaks of it as a "great useless sheet of water, only navigable a mile or two within the entrance, and that chiefly on the northern side, the rest being occupied by mud flats." A very different opinion was however expressed concerning this inlet by its discoverer, Captain Lewis, the harbour-master of Port Phillip, who states that he "never entered a finer harbour," and adds that on entering it, keeping the promontory close on board, there were not less than three fathoms between the reefs: no bottom was found at twenty fathoms, nor for a considerable distance up the harbour. A group of islets named from their utility *Direction Isles*, lie a few miles outside the bar. Close to the promontory, and about seven miles from the entrance of Corner inlet, is a small islet called *Rabbit Island*, from the numbers of these animals found there, the progeny of a pair turned loose by a sealer about ten years ago. Over the north shore of Corner inlet is a woody range, the summit of which, Mount Fatigue, is 2,110 feet high. A small stream called *Franklin River* falls into Corner inlet from the north, and thence to Port Albert the coast is intersected by numerous creeks.

Port Albert is situated about fifteen miles to the eastward of Corner inlet, in 38° 44′ S. lat., and 146° 41′ E. long. It is a valuable harbour, available for vessels of 200 tons. The entrance is said to be rather intricate and circuitous, but not dangerous to those at all acquainted with the channel. "It has this special advantage," says Dr. Lang, "that when it would be unsafe—as I suspect it would in a violent south-easterly gale—to attempt the channel, there is shelter for vessels close at hand, between Rabbit island and the mainland of Wilson promontory."

Albert River and *Tarra River* fall into this port. Both these streams originate in thickly timbered ranges, about twenty miles inland. On the banks of the latter river the rising town of Alberton, the embryo capital of Gipps' Land, is built. Several islands, of various forms and sizes, lie off Port Albert.

Vessels bound to Alberton usually pass through *Shallow Inlet*; but the water being so shallow as to break across the entrance, if there is any swell, it is considered more prudent to enter by Corner inlet, and take the second opening on the right within the entrance.

Tracing the coast line from Alberton, first in a south-east and then in a north-east direction, we find it presenting few remarkable features. Occasionally it is broken by

mariner, in entering, might touch the rocks with his vessel's broadside, and still float in six fathoms water. The shores are rocky, exceedingly steep, and covered with dense impenetrable scrub; the rocks are principally of granite. Good water is to be obtained in this locality. The bay, too, has the usual character of unfrequented harbours on this coast, abounding with fish."

streams descending from the south-eastern flanks of the Snowy mountains, of which *Merriman's Creek* is one of the largest; but there is little to deserve especial notice until we arrive at a series of lakes or lagoons, connected with each other, and running parallel to the ocean, with which they communicate by a narrow and unfortunately, not navigable channel. The largest and most westerly of these, *Lake Wellington*, contains fresh water, and is about twenty miles long, by about ten broad. It is joined to *Lake King* by a central and narrow lake, assuming towards Lake Wellington the character of a river. *Lake Reeve*, situated between the central lake and the sea, has a length of about eighty miles, opening into Lake King at its eastern extremity. The depth of water in mid-channel is twenty feet, and in some places this depth is maintained right across from land to land; but in others there are shallows and banks on either side. Into these lakes various rivers, all of which take their rise in the south-eastern face of the Snowy mountains, or rather on the eastern side of the dividing range, disembogue,—*Latrobe River* and the *Dunlop* or *Avon* falling into Lake Wellington, *Providence Ponds* into the central lake, and the *M'Arthur* or *Mitchell*, the *Riley*, and the *Tambo* into Lake King. According to Dr. Lang, the Latrobe is navigable for thirty miles from its embouche, the M'Arthur for twenty, and the Tambo for ten; but they have each a bar, carrying seven feet water, at their mouths. The Latrobe is much the largest of the three, and forms the general receptacle of the streams that rise on the eastern side of the dividing range for nearly a hundred miles, as well as of those that rise on the northern side of the coast range. Its principal tributaries, among which are the *M'Alister* and the *Barney*, originate in lofty mountains, of which the highest peaks are covered with perpetual snow; and therefore, they are not mere torrents, but perennial streams.*

After leaving Lake King, the coast-line becomes exceedingly monotonous, and continues so during the long tract extending towards Cape Howe, called the *Ninety-mile beach*, which has, I believe, not yet been surveyed.

To the eastward of Lake King is *Lake Tyers*, an interior lagoon, twenty miles from which the coast is broken by the impetuous torrent carried to the ocean by the *Margalong* or *Snowy River*. This stream rises in the Australian Alps, traverses the western portion of Monaroo plains, then pursuing a southerly course, dashes along its rocky channel from precipice to precipice, forming in its rapid descent many splendid waterfalls.

Jenoa River falls into the ocean at an inlet, a few miles west of Cape Howe.

Gabo Island, on which it is proposed to erect a lighthouse, is situated about a quarter of a mile from the sandy spit of Cape Howe. This isle is a mile and-a-half long, by three-quarters of a mile in breadth; it has a basis of solid rock, with some grassy land, and springs of fresh water. The highest part is 158 feet above the level of the sea. On the north-west of the island is a bay named *Santa Barbara*, where vessels not exceeding 100 tons may find shelter from south-east and south-west gales. Tenders have been issued by government for the construction of a light, as recommended by Mr. Tyers, which would be very advantageous to the coasting trade, and to all vessels navigating the south-east coast of Australia.

We have now traced all the rivers of any importance which fall into the ocean, as we had previously done those which through different channels unite their waters with the Murray or Hume; a few streams, however, still remain unnoticed which flow inland, and pour their waters into interior lagoons, or (like some of the streams in the older province) spread themselves over extensive marshes.

Of these the most remarkable is *Wimmera River*, which originates near Mount Cole, in the Pyrenees, thence pursuing a shallow and tortuous course for about 200 miles, through a region of sand and heath, succeeded by jungle and *mallee* (*eucalyptus dumosa*) scrub, intermingled occasionally with open plains and tolerable pasturage, it disembogues in Lake Hindmarsh. (See Lake Hindmarsh, p. 596.)

The leading characteristic of the Wimmera is its long and beautiful reaches, which extend towards the north and west, and are so numerous that Mitchell, after fording the main channel in 36° 46′ 30″ S. lat., 142° 39′ 25″ E. long., crossed no less than five, within the distance of a mile-and-a-half.

Avoca River, like the Wimmera, rises near Mount Cole, divides the Western Port from the Wimmera district, and disembogues in Lake Bael Bael. (See Lake Bael Bael, p. 596.)

* *Phillip's Land*, by Dr. Lang.

A small stream named *Avon River* flows between the Wimmera and Avoca, and falls into Lake Banynong. *Woady Yaloah River* flows in a different direction to those just mentioned. It takes its rise near *Lake Barrambeet*, thence running a southerly course, it receives numerous tributaries, and falls into Lake Corangymite.

Lakes.—The numerous inland lakes of this province are among the most remarkable of its physical features. The waters of many of them are quite salt, much more so indeed than the waters of the ocean; and in summer, when the extensive evaporation that always takes place at that season leaves a large extent of the surface usually covered with water, and sometimes the whole bed of the lake quite dry, the salt is found in large crystals to the depth of three or four inches, and sometimes even of six, within the usual water-mark. It is of excellent quality, and is used for all domestic purposes by the squatters in this part of the territory, requiring only to be pounded when used for the table. (See Geology of Victoria.)

Lake Corangymite, (so called from the native word, corang or coraing, signifying bitter,) the largest, is situated in the Portland Bay district, between the counties of Hampden, Grenville, Heytesbury, and Polwarth. It lies about fifty miles due west of the town of Geelong. When first discovered, it was supposed, from its vast size, to be an arm of the sea, but was proved by Dr. Thomson to be a lake, apparently exceeding ninety miles in circumference. Its waters are perfectly salt, and towards the southward become very shallow. To the north the lake deepens to a degree which has not been ascertained. Lake Corangymite consists properly of two lakes, the smaller of which (called Gnarpurt) is situated at the north-western extremity of the larger—is of a circular shape, and does not appear to exceed eight or nine miles in circumference. The large lake is of a very irregular and serpentine form; and although the banks are generally rather bare of wood, it forms an attractive object in many fine views. This vast basin is supplied by numerous fresh-water streams, most of which, however, are in summer merely chains of ponds, their channels being, occasionally, quite dry. The Woady Yaloah enters the lake at its north-eastern extremity; the Perring Yaloah at its southern. These streams have been known to rise, in a single night, with such rapidity, as to sweep away bullocks, drays, and even men, encamped incautiously on their banks.* There are many small lakes in the vicinity of Lake Corangymite, most of them containing salt water. *Lake Colac*, however, is among the exceptions, being a beautiful sheet of fresh water, measuring from seven to eight miles in length, by from two to three in breadth. *Lake Poorumbeet* is another fresh-water lake, in form nearly circular, and measuring about four miles in circumference. The banks are precipitous, except at two or three points, where they sink to the level of the adjacent country. The lake is much frequented by water-fowl. The water, which is of excellent quality, and of unknown depth, is supplied by springs underground. It has an outlet to the southward, where the water that escapes forms first a marsh, and afterwards a small creek or stream. Lakes Colac and Poorumbeet lie near the southern extremity of lake Corangymite, the former to the eastward, the latter to the westward.

Lakes Barrambeet and *Boloke*, or *Bolac*, are small fresh-water lakes, situated in the Portland Bay district. Lake Bolac is some three miles in length, by about the same breadth. At one point the water is salt, but elsewhere quite fresh. It is chiefly supplied by Fiery Creek, a small stream from the Pyrences.

Modewarre Lake (fourteen miles to the south-west of Geelong) is of a circular form, very shallow, and about six miles in circumference. The banks are formed into regular terraces all round, as if the water had once stood at a much higher level than it usually does now. In the continued drought of 1845 and 1846, the basin was quite dry, which it had not been previously during the recollection of the settlers. Its character and origin appear to be similar to the numerous circular lakes discovered by Mitchell, about 150 miles to the westward, named by him Greenhill Lake, Mitre Lake, &c.

Lake Hindmarsh, in the Wimmera district, is a fresh-water lake, estimated at about thirty miles in circumference. It is entirely supplied by the Wimmera river, which enters it from the south, and has an outlet on the north, whence it pursues its course through a barren and uninhabited region, to a second lake, from which it emerges as from Lake Hindmarsh, and is finally lost in a third.

Lake Bael Bael, situated between the Wimmera district and the Western Port district,

* Lang's *Phillip's Land.*

receives one branch of the Avoca river, the second pursues a northerly course, till again dividing, one channel terminates in a smaller lake; the other proceeds in a north-easterly direction, until it is also lost in an extensive lagoon.

Lake Banynong (in the Wimmera district) receives the Avon river.

Lake Boga—one of the numerous lakes bordering the upper course of the Loddon, near its junction with the Murray or Hume; is about twelve miles round, fresh, and probably of considerable depth. A low neck of firm ground separates it from a smaller lake, (about three miles in circumference) which is surrounded with reeds and bulrushes, and covered with black swans, ducks, and other water fowl.

Lake Omeo, situated in the Australian Alps, between the Mitta Mitta and Livingstone rivers, is an extensive basin, marked in Mr. Ham's recent map (1849) by the emphatic monosyllable, "dry." Count Strzelecki, in 1840, describes it as possessing only the shape of a lake, with scanty water, and rich pasturage. It bears a striking analogy to Lake Bathurst and Lake George, being, like them, destitute of springs and feeders, above the level of the adjacent rivers, and assimilating, in shape, rather to a drained reservoir, than to the natural basin of a lake.

Divisions.—The larger and more southerly portion of Victoria has been lately marked out into counties. The three first established were, the counties of Bourke (containing the city of Melbourne), Grant (the town of Geelong), and Normanby (the town of Portland); to these have been added those of Follet, Dundas, Villiers, Ripon, Hampden, Heytesbury, Talbot, Grenville, Polworth, Dalhousie, Rodney, Anglesey, Evelyn, Mornington, Douro, Haddington, Bruce, Abinger, Combermere, and Howe.

The designations of Port Phillip or Australia Felix are frequently applied to the whole province, although the region on which the latter term was originally bestowed extends only between the Glenelg and Campaspé rivers. The north-eastern portion of Victoria is usually termed *Murray district;* the north-western, *Wimmera district;* the south-eastern, *Gipps' Land;* the south-western, *Portland Bay district;* and the central, *Western Port district;* but the exact limits of these temporary divisions are very vaguely defined, and can be but of little interest to the general reader.* The capital of a newly colonized region is necessarily the first object of interest; we therefore proceed at once to examine the condition of Melbourne.

Melbourne, the adjacent country, and the Western Port District generally.—The better to understand the actual position of this embryo capital of an embryo province, and to appreciate the incontrovertible evidence which it affords of the enterprising spirit of our Anglo-Australian brethren, we must look back upon its condition twelve years ago.

* The boundaries stated by Mr. Wells, in his *Australian Gazetteer* (1848), of the three first established counties, and of the five squatting districts above mentioned, are:—

Bourke County (Melbourne) sixty-five miles long, sixty broad, area about 2,500,000 acres, bounded on the south-west and west by the Werribbee, from its mouth to its source in the great dividing range; on the north by the great dividing range, from the source of the Werribbee to that of the Plenty river; on the east by Plenty river, from its source to its confluence with the Yarra Yarra river, thence upward by that river to the confluence of the Deep creek, thence by Deep creek upward to the point where the main stream commences to run in a north-west direction; thence by a line southerly from the aforesaid bend to the Dandenong creek; thence downward to the shore of the Port Phillip bay, and on the south by the shores of Port Phillip bay to the mouth of the Werribbee aforesaid.

"*Grant County* (Geelong), fifty-eight miles long, north to south; forty-two miles broad, east to west; area 1,000,000 acres; bounded on the east by the western boundary of Bourke County; on the north by the dividing range, extending from Mount Blackwood to Mount Buninyong; on the west by Williamson's creek, to its confluence with the Yarrowee river, thence to its confluence with the Barwon river; and by that river to its source, and by a line south to the sea coast and the waters of Port Phillip bay.

"*Normanby County* (Portland), fifty miles long, north to south; eighty miles broad, east to west: area about 2,000,000 acres; bounded on the west by the Glenelg river, from its mouth to where the Wannon river joins it; on the north, by the Wannon river and Grange-Burn, thence by a line easterly to Lake Linlithgow, following Cameron's creek to its source, and by a line south-east to the head of Muston's creek; on the east by Muston's creek to its junction with the Hopkin's river, following the course of that river until it reaches the sea; and on the south by the seashore to the mouth of the Glenelg, including the Lawrence, Lady Julia, Percy's Island, and the small islands at Port Fairy.

"*Western Port District* is bounded on the south by the sea coast from Anderson's inlet to the south-east limit of the county of Bourke, further by the east and north boundaries of the said county to the Werribbee river, and a north-west line to Mount Cole, thence by a line to the Avoca river, by the Avoca river to Lake Bael-Bael, and thence by a line, due north, to the Murray river; on the north and north-east by the Murray to the Goulburn, following the latter river to its source, and on the east by a line

In January, 1838, it consisted of a nucleus of huts embowered in the forest foliage, and had much the appearance of an Indian village. Two wooden houses served the purpose of inns, for the settlers who frequented the place. A small square wooden building, with an old ship's bell suspended from a tree, was used as a church or chapel by the various religious denominations; two or three so-called shops formed emporiums for the sale of every description of useful articles; the flesh of the kangaroo and varieties of wild fowl were abundantly used, for fresh mutton was still scarce, and beef seldom seen; and a *manuscript* newspaper, established by Fawkner, one of the enterprising men to whom England is indebted for the formation of this settlement, was the organ of public opinion in the new colony.

Fortunately, on the spot selected for the city, excellent brick earth was discovered at the river side, and the neighbourhood yielded much fine and rough stone, adapted for the builder. The progress of Melbourne during the ensuing six months was extraordinary. Mr. Arden, one of its early residents, states, in the useful manual to which we have previously referred, that "so rapid had been its progress, as to render it impossible for the memory to keep pace with the movement." Brick buildings, some even of two or three stories high, were numerous; the inns were transformed into handsome and convenient hotels; the lines of streets had been cleared, marked, and were, in some parts, under a process of partial macadamization; many shops, warehouses, agencies, had been established; population had quadrupled; branches of two Sydney banks were in active operation; and, in October, the *Port Phillip Gazette* was issued from the printing-office of Melbourne.

The rapid growth of the capital* received, in the years 1841–2, a severe but temporary check. Its progress since, though less speedy, lacking the strong excitement, not to say the infatuation, which characterized its earlier formation, has been steady; and the Melbourne of 1850 would do no discredit to a province of far older establishment and more developed resources. The chief defect in the plan of the city is the concentration of the buildings, the plan originally laid down having been on too small a scale. This is easily accounted for, as Melbourne was not originally intended for the capital o. the province, the locality selected by Sir

running due south to Anderson's inlet. The area within the above limits is estimated at 10,000,000 acres.

"*Portland Bay District* is bounded on the west by part of the South Australian frontier; on the north by the range dividing the waters falling into the Murray, from the waters falling into the Glenelg and other rivers to the east of Portland bay, extending from the head of the Glenelg to Mount Cole; on the east by part of the Western Port district, and the county of Grant; and on the south by the sea coast, exclusive of the county of Normanby. Area about 10,000,000 acres. [This large extent of country is now being divided into several counties—see accompanying map.]

"The *Wimmera District* is bounded on the east by a line from Mount Cole to the source of the Avoca river, thence by the Avoca river to Lake Baelbael, thence by a line due north to the Murray river; on the north by the Murray to the South Australian frontier; on the west by the South Australian frontier to the range dividing the waters that fall into the Murray from those falling into the Glenelg, and other rivers to the eastward of Portland bay; and on the south by that range to Mount Cole. The area is estimated at 15,000,000 acres.

"The *Murray District* is bounded on the south and west by the Goulburn river, to its junction with the Murray river; on the north and north-east by the Murray river, and its tributaries; and on the south-east by the dividing range, termed the Australian Alps. It contains about 8,000,000 acres."

Mr. Wells does not give any assignable boundaries to Gipp's Land.

* The following statement shews the progress of Melbourne from wild desert in 1836–7, to October, 1840. The figures and calculations are from June, 1837, to October, 1840:—

June, 1837—Population, 250; number of buildings, 36; value of buildings, £1,800; value of land, £3,517.

June, 1838—Population, 1,800; number of buildings, 300; value of buildings, £60,000; value of land, £17,406.

June, 1839—Population, 3,000; number of buildings, 560; value of buildings, £112,000; value of land, £169,542.

October, 1840—Population, 5,538; number of buildings, 923; value of buildings, £230,750; value of land, £372,600.

To the value of buildings	£230,750
Add value of land	372,600
Add the stock in trade of 36 mercantile houses, averaging £10,000	360,000
Of 175 miscellaneous dealers, aver. £250	43,750
3,000 tons colonial shipping, averaging £20 per ton	60,000
Deposits and capital of three banks, averaging £100,000	300,000
Paid up capital of five companies at £10,000	50,000
And the total value of property will be	£1,392,000

One million three hundred and ninety-two thousand pounds sterling!

During the year 1840, the number of vessels which arrived at Melbourne was 313, nearly averaging one a-day (excepting the Sabbath), and the tonnage entering the port amounted to 54,928 tons.

Richard Bourke being Point Gellibrand, the peninsula forming the southern shore of Hobson's bay, (at the north-east end of the bay of Port Phillip,) on which Williamstown now stands. The want of fresh water at Williamstown appears to have been the chief obstacle to this design; while, on the other hand, the abundant supply afforded by the Yarra Yarra river to Melbourne and its vicinity, was naturally a striking advantage in the eyes of many intending settlers, who probably could not conveniently spare the time or means necessary to ensure a sufficiency of that indispensable article of subsistence. Williamstown is the anchorage station for ships, as only small craft pass up the Yarra Yarra to the capital.*

The public buildings of Melbourne, though necessarily not very numerous, are of a respectable, and even superior class. The court-house and gaol at Melbourne have been erected, at a cost to the colonists of £30,000. The gaol, a gloomy-looking pile, constructed of dark ferruginous sandstone, is favourably situated for health and exercise, and commands one of the finest marine views in the neighbourhood of the city. The building containing the government offices, placed on a commanding eminence in the western quarter of the town, near the court-house, is composed of dark blue whinstone and a light-greyish granite, which are judiciously blended. The custom-house, the next public building of importance, is stated to be a "chaste structure." The "Union" and the "Austral-Asian" banks have handsome houses. The episcopalian, presbyterian, Roman catholic, Wesleyan, independent, and congregational temples of worship, are all substantial edifices. There is a mechanics' institute, erected of stone, at a cost of £4,000, and various other public and private structures. There is a general market, a cattle market, and hay and corn markets, all under the superintendence of properly-qualified inspectors; and hotels of various grades. A bridge is now being constructed over the Yarra Yarra, composed of a single arch, 150 feet span, and thirty feet in width, which, it is estimated, will cost £10,000. A botanical garden has been established in one of the beautiful bends of the river, and a good race-course has been laid out in the vicinity of the city. The streets are planned at right angles, the larger ones being a hundred feet in width, the smaller about thirty. The principal street is, strangely enough, named Collins, after the brave officer who, when directed, in 1803, to form a settlement at Port Phillip, declared it to be "all barren," and abandoned it as a hopeless undertaking. Elizabeth-street is situated in a hollow, between two considerable acclivities to the eastward and westward, called the Eastern and Western hills, the course of the river being nearly due west.

Melbourne is divided into four wards, and is under the municipal government of a corporation, consisting of a mayor, four aldermen, and twelve town councillors, whose exertions, though commenced at a period of general depression and commercial difficulty (November, 1842), speedily effected an improvement in the condition of the rising metropolis. The streets and by-ways of Melbourne (previous to the existence of the corporation) are described as having been frequently rendered impassable, from the operation of the weather, and the ceaseless traffic of ponderous bullock-drays. Thick gum tree stumps, and deep ruts, forming vast reservoirs of mud, were variegated by the intersecting gullies of temporary watercourses; and many an anxious wife and mother scanned the deep abyss of the urban excavations, in search of a drunken husband or a wayward child. A visitor, writing in 1842, declares himself to have been startled, soon after his arrival in the colony, by a paragraph in the newspaper, headed, "*Another* child drowned in the streets of Melbourne." In the following year, however, the stumps were removed by order of the town council, and the occasion of frequent accidents thus removed.† On the south bank of the Yarra Yarra, within a distance of three miles from Melbourne, there are many pretty cottages, surrounded by fertile and productive gardens, extending over a gently undulating

* Captain Stokes relates an anecdote when describing the bay of Port Phillip, which well illustrates the difficulty of detecting the mouths of Australian rivers. "In the north-west corner of Hobson's bay is the mouth of the Yarra Yarra river; but although only one mile and-a-half from the general anchorage, it is very difficult to be made out. Soon after we (*i. e.* H.M.S. *Beagle*) anchored in Hobson's bay, a small schooner passed, going to Melbourne. Several of the officers were at the time standing on the poop, and each selected a spot at which the schooner was to enter the river; and although, as I have before stated, we were only a mile and a half from it, none of us was right. A single tall bushy-topped tree, about a mile inland, rose over the schooner as she left the waters of Hobson's bay."

† *Australia Felix*, by Westgarth; *Sydney and Melbourne*, by Baker.

declivity to the water's edge. The beauty of the scenery is enhanced by hills, and bold woodland in the background.

To the left of the city, and almost forming a part of it, is a small green hill (Batman's) of a conical shape, washed at its base by the Yarra Yarra river, from which the ascent is rather precipitous. On the opposite side there is a gentle slope towards an open plain, with clumps of trees spread here and there in wild and irregular beauty. Further on is a long swamp, nearly always covered with water, which gives it the appearance of a fine lake; beyond it the Willoughby plains commence, studded with trees like an English park. The level of these plains is interrupted by a succession of green mounds, then by undulating flats, less timbered. The view is bounded by a lofty range of mountains, which begin near Geelong and continue many miles into the interior of the country.

On the east of Melbourne, the view is bounded by the *Western Port range* of mountains, which stretches from the sea-coast inland until it reaches the *Plenty range*. The country between Melbourne and Western Port is a vast forest, broken at regular intervals by a succession of hills and valleys, which present many picturesque views.

The township of Collingwood, formerly Newtown, almost joins Melbourne; it has three hotels, one brewery, and numerous stores. Further inland, upon the banks of the Yarra Yarra, is the township of Clifton. For many miles the banks of this "wildly beautiful stream" are lined with villas and parks, and fringed with the graceful Yarra and mimosa trees.

In a westerly direction from Melbourne, in the direction of Mount Macedon, an open grassy plain extends for more than thirty miles, traversed by numerous creeks, and thickly covered with homesteads. The soil is light and dry, producing excellent pasture for sheep. Further west are the deep and romantic gullies of the Werribbee and adjacent creeks. The north portion of the Western Port district contains much valuable land, especially the extensive plains which extend between the Loddon and the Campaspé rivers, and also between the Campaspé and Goulburn or Bayùnga, immediately below their junction with the Hume, to the south of which open forest country, clothed with good grass, but with occasional belts of scrub, extends along the eastern bank of the Loddon river.

Mr. James, speaking generally of the country behind the coast of Port Phillip and Portland Bay, describes it as among "the finest countries not only in Australia but perhaps in the world. Nobody can visit the banks of the Yarra Yarra, the heads of the river Plenty, the country about Mount Macedon, and the river Campaspé, without being charmed with its magnificence and brilliancy."

Mr. Richard Howitt—who was unfortunate in his attempt to settle in Victoria, partly (it would appear even from his interesting account of his proceedings) from his own inexperience, and want of perseverance, but chiefly from the disastrous period during which that attempt was made—in describing an excursion in search of his stray bullocks, which led him to within twelve miles of Mount Macedon, bears the following testimony to the goodliness of the land:—"A more picturesque and beautiful region was never looked upon. I saw a great deal of very delightful country; it had a delicately-smooth lawnlike surface, without scrub or stones. Around me spread a spacious plain, the 'she oaks,' a rich silky brown, scattered thinly and in clumps; further off, bounding the plain, knolls, slopes, and glens, all of the smoothest outline, crowned or sprinkled with the same trees; and beyond, mountains and mountain ranges on which rested deliciously the blue of the summer heavens. Some of these mountains were wooded to the summits, others revealed through openings immeasurable plains, where sheep were whitely dotting the landscape, the golden shadows seen at intervals betwixt the long shadows of the 'she oaks.' A more splendid and extensive country there is not in the world for sheep and cattle than Australia Felix. How fat and sleek are its immense herds! I speak not here of the immediate neighbourhood of the town, but of the country generally." *

Williamstown (the sea-port town of Melbourne) whose early pretensions have been so effectually overshadowed by its powerful neighbour, is at present a mere coast village, with about 126 houses and 322 inhabitants. It nevertheless possesses great natural advantages. Situated at the head of the harbour of Port Phillip, with fine anchorage, a beach admirably adapted for the construction of piers and wharfs, and a considerable extent of level land washed on

* *Howitt's Impressions of Australia Felix*, pp. 108—115.

three sides by the sea, it is only reasonable to suppose that Williamstown will eventually become an important place, as its disadvantage (the want of water) is remediable. The only fault in its haven (Hobson's bay) appears to be that Point Gellibrand scarcely projects sufficiently to shelter large ships from south winds.

St. Kilda and *Brighton*, are two pleasant villages, situated on the eastern shore of the bay of Port Phillip, the former about two or three, the latter about six miles from Melbourne, in both of which are a considerable number of rural villas and *cottages ornée*, the residences, either constant or occasional, of respectable persons in business in the city. St. Kilda is the first point on the bay to the eastward, where the land is sufficiently elevated to be above the reach of all land-floods, and the terrace to seaward, in front of the line of houses along the bay, both there and at Brighton, at all seasons, in so fine a climate, forms a delightful promenade.

The route and distances by which the "royal mail" travels from Melbourne, the capital of Victoria, to Sydney, the capital of New South Wales, are—*Melbourne* to Kinlochewe, 18 miles; Kilmore, 32; Goulburn river, 25; Honeysuckle creek, 56; Ovens river, 53; Albury, 50; Tarcotta creek, 85; Gundagai, 35; Yass, 66; Goulburn, 60; Berrima, 40; Campbeltown, 47; *Sydney*, 33; total, 590 miles. Some of these estimates, however, must be under the mark, for the whole distance is about 600 miles. The "royal mail" leaves Sydney and Melbourne twice in each week.

From Melbourne to Portland, 253 miles, there is also a "royal mail" conveyance once a week. Three steam boats ply daily between Melbourne and and Geelong.

Geelong and its vicinity.—Geelong, the capital of the county of Grant (distant forty-five miles from Melbourne) stands partly on the picturesque cliffs of the fine harbour whose anchorage it overlooks, and partly on the river Barwon. Geelong harbour is situated at the head of the deep inlet formed by the western arm of Port Phillip. Its southern point is a level expanse of land, named Point Henry, from which a long spit extends, leaving only a shoal channel between it and the northern shore. Thus, though the harbour has apparently a broad open mouth, it is impossible for a large ship to enter it, so that the vessels which are annually charged with the large quantities of wool now exported from Geelong, are obliged to lie to the eastward of Point Henry, about seven miles distant from the port. The bar, which has but nine feet water at high tide, is said to be composed of an ancient deposit of shells and other matter of inferior tenacity, and its removal is considered practicable. Geelong has several commodious places of worship; some good warehouses have been erected in the town, and the neighbourhood is adorned with cottages and gardens. The principal inn (Mack's hotel) is built on a very large and expensive scale. Like most other Australian towns, Geelong has its race ground. Two small steam-boats ply on alternate days between Geelong and Melbourne, a passage of about six hours' duration. Geelong and Corio each support a weekly newspaper.

The same policy, noticed in a previous instance, as having proved so *unconcentrative*, is exemplified yet more forcibly in the case of Geelong. The high price fixed upon the town allotments being found to hinder its formation, Sir George Gipps separated the township into two parts, calling the portion nearest the harbour North Geelong, and the other South Geelong, the minimum price of allotments in the former being £300 an acre, in the latter, £150. Suburban allotments, however, being procurable at the rate of £5 an acre, in one locality, and of £2 in another, opposition towns were formed immediately beyond the boundaries of the government towns. There is thus the rival town of *Ashby*, a mile from North Geelong; *Irishtown*, the rival of South Geelong, from which it is also a mile distant; and *Newtown*, a third opposition town, between the other two. The last census (1846) states the population of the government towns at 1,370, and that of the three opposition towns at 695. Corio, (pronounced Coraio, with the accent on the second syllable), is the native name for the beach at Geelong: the residents in the place usually call the town of North Geelong, Corio. About a mile and-a-quarter from Corio, the Barwon river passes Geelong, in its tortuous course, to the ocean; and as there is a natural terrace on each side of the river, parallel to its banks, several suburban allotments have been purchased in the vicinity, and delightful villas constructed on either bank. The country round Geelong and the neighbouring villages is admired alike for the beauty of its scenery and the richness of its soil, which will probably eventually render it a valuable agricultural district. A vineyard,

established near Geelong, among the Barrabool hills, by three families of Vignerons, from the canton of Neufchatel in Switzerland, produced, in 1846, at the rate of 1,000 gallons of wine per acre. The peninsula included between the Barwon river and the western arm of Port Phillip, which is probably about twenty-five miles in length, from Indented Head to Geelong, contains about 160,000 acres, of which the greater part consists of land of the first quality, whether for pasture or cultivation. It seems to be a continuation of the same tract of level country that stretches along for upwards of 200 miles to the westward of Geelong, between the coast range, or Marrack hills, and the ranges of the interior.

To the westward of Geelong, grassy hills, occasionally varied with clumps of trees, extend towards lake Colac. An immense forest, between Geelong and Melbourne, was at first reported to be composed of cedar. On subsequent investigation, it appeared that the trees were not cedar, but a hard, solid, close-grained, dark-brown coloured wood, with straight trunks of twenty-five feet, and an average circumference of nine feet.

The country from Geelong to the Glenelg river may, in general terms, be described as a parallellogram, of 200 miles in length, by twenty-five miles in average breadth, the whole of which consists of land of the first quality for cultivation. It is nearly a dead level; and, for a railway, would present few engineering difficulties, and require no tunnelling or embankments. There is abundance of indigenous hard timber throughout; and a wooden railway might be laid down, at a cost of £1,000 per mile, whereby upwards of three million acres of the richest land would be rendered immediately available for the settlement of a numerous agricultural population.

Portland Bay District and Portland Town.—This district consists of a series of undulations, intersected by numerous rivers and creeks. *Portland*, the chief town of Normanby county, and indeed of the Portland Bay district, is built on slightly rising ground, on the western side of the fine bay, whose name it bears. It is well placed, presenting a fine bold terrace towards the sea, backed by a sufficient extent of level ground for a large town.

The first town allotments in Portland were sold on the 15th October, 1840, and the land mania having then reached its height, the forty allotments then disposed of realised £11,026. Dr. Lang, writing in 1847, says, that nearly £30,000 have since been invested in buildings. The population of Portland in 1846 was 510. Its trade is already considerable, and it has two respectable weekly journals. Mr. Angas, speaking from personal observation, says that the country in this vicinity bears marks of having been raised by volcanic action from beneath the ocean; the same white coral limestone which occurs at Mount Gambier, also appears here. The aspect of the land resembles that in the neighbourhood of Cape Northumberland, and it would seem that a similar belt of country extends in this direction. A thickly wooded district is in the immediate vicinity of the bay, consisting of stunted eucalypti, black-wood, mimosa-wattle, the cherry (exocarpus), and a little underwood. The soil is rich, the country verdant, even in midwinter, and the climate cooler than that of Adelaide. The establishments of Messrs. Henty (the first settlers at Portland Bay) are extensive, and the town has grown up around them. The soil around Portland Bay is described to be of the richest alluvial kind; the vegetable productions remarkable for their size and quality—the barley "yielding for four years a continued crop"—the timber peculiar for both beauty and utility, and the climate unrivalled. Several whaling vessels annually take up their stations in the bay, the property of parties residing in the neighbouring colonies. The anchorage is good; the water in the harbour sometimes smooth enough to admit of landing from boats; it is, however, often troublesome, and indeed dangerous, to debark on the open beach; and several shipwrecks and loss of life have occurred. A wooden railroad and jetty have been constructed from the stringy bark wood in the neighbouring forest, for the conveyance of goods to and from the vessels in the bay.

Belfast is a thriving sea-port town, also situated in the county of Normanby, on Port Fairy. It is 779 miles from Sydney. Population in 1846 was 269.

One of the finest tracts in the district is situated between the Grampians and the boundary of South Australia. The rich black soil, several feet deep on a subsoil of clay, is lightly wooded, covered with the finest pasturage, and abundantly watered by the Grange Burn, Wannon, Glenelg, and their tributaries. The country near the coast, between the mouth of the Glenelg

and Point Fairy, is generally poor, but there is some better soil on the banks of the river Crawford, and the land on the Fitzroy river is adapted for either grazing or cultivation. In the immediate vicinity of Mount Eckerley (Normanby county), there is a tract called "the five-mile patch," reported to be of extraordinary fertility. Mount Rouse (Villiers county) is of trap formation, the soil around it, and between it and Mount Shadwell is good, but swamps are numerous. An open forest of stunted Banksiæ extends six miles to the northward of Mount Rouse. Fine downs for two or three miles in width, divide this from an open forest (chiefly of eucalypti) extending some distance east and west of Mount Sturgeon, the soil being pretty good.*

The country around Cape Otway is almost unknown, owing to its being densely timbered with forest trees of gigantic size, covered with rank and nearly tropical vegetation, consisting of an undergrowth of vines and other creepers, which flourish with extraordinary luxuriance, and form a trellis-work from tree to tree, through which a passage can with difficulty be effected by a tomahawk; the whole intersected with ravines and ranges which render exploration very difficult. This tract extends over about two million of acres, and is said by the few who have penetrated it to some extent to be plentifully watered by running streams. The timber is of the most valuable description, and includes a cedar not found in other parts of the province. The country, although now considered wild and impracticable will, it is supposed, from its peculiar resources, be eventually found available for small settlers of the non-stockholding yeomanry.

An open country, with vast plains, extends from Lake Colac and the river Leigh, to the north and west of Lake Corangymite and Mount Elephant. To the southward of Colac Lake there is a romantically beautiful district, with a thickly grassed soil, interspersed with the tracts termed "stony rises." Near Lake Corangymite the land is equally fine, especially to the westward. In the neighbourhood of Lake Killambeet there are plains of great extent, belted with tall trees, copses, and open forest. North-west of Lake Porumbeet, on the road from Melbourne to Portland, "the country," says Dr. Lang, "for the next seven or eight miles, continues pretty much the same as before, rich plains, slightly undulating, with a thick carpeting of grass, but with a somewhat greater frequency and variety of natural wood." The Mount Leura district is remarkably well watered, rain is frequent, springs abundant, as well as creeks or small streams, and water holes, or natural pools. A whimsical proof of the contrast afforded by a large portion of the Portland Bay district and the adjacent regions, to the impenetrable nature of other parts of the province, was afforded in the early days of the colony by Messrs. Hawdon and Mundy, who left the neighbourhood of Mount Macedon, in a *tandem*, on the 11th of July, 1839, and drove through the uninhabited country to Adelaide, a distance of 540 miles in twenty-seven days. They described this extensive region as being for the greater part like an English park.

Wimmera Squatting District. — Sandy wastes, alternating with extensive tracts, covered with the impenetrable scrub (*eucalyptus dumosa*) called *Mallee* by the aborigines, render the northern and western portions of this district hopelessly barren; but on the east of the Wimmera river a good sheep country extends in a parallel direction with the river, composed of light forest and plains. The lakes of this district are numerous, the chief of them, namely, Hindmarsh, Boga, Bael-Bael, and others, have been already mentioned.

Murray District.—Count Strzelecki, on his journey to Gipps' Land, visited this district, and crossed *Mane's range*, a spur of the Australian Alps, which divides the tributary creeks that flow from either side to the Murray and the Murrimbidgee. To the eastward of the meridian of 148° the mountains present the effects of some extraordinary perturbations, and form many culminating and characteristic eminences; to the westward they are grouped in confusion, and the country is broken, rocky, and often impassable. But both the ranges and valleys furnish abundant natural and artificial crops, as is evident from the healthy state of the sheep and cattle, and from the returns of grain which the squatters obtain from the culture of the soil. Between the Mane and Ajuk ranges north of the parallel of 37°, every feature bears the stamp of grandeur; the broken country to the westward in which the Tangella creek takes its rise, to the eastward, the dividing range, here called the Australian Alps, with its stupendous peaks and domes, and in front the beautiful valley which the Murray so bountifully waters,

* Tyer's *Report.*

unite to form attractions of no ordinary magnitude. Count Strzelecki followed the windings of a valley in this district for about seventy miles, and found it intersected by gullies and torrents, and by numberless steep ridges.

The soil in all the valleys is composed of disintegrated argillaceous and calcareous rocks, richly mixed with sediments of decomposed vegetable matter. For pasture and agriculture, the valley of the Murray, with those adjacent, and the country round Lake Omeo, offer the most suitable spots. Strzelecki says, the Murray, with its tributaries, the Mitta-Mitta, and others, supply both the valleys and Omeo with plentiful streams; everywhere nature seems to have most liberally enriched this district for the benefit of man.

Mercer's Vale is a grassy plain of ten or twelve miles in extent, almost completely destitute of timber, and surrounded in great measure by hills of moderate elevation, and distant mountain ranges.

Gipps' Land District and Alberton.—This important section of the Victoria Province may be said to extend from Cape Howe to Cape Paterson, near Western Port, on a sea-coast line of about three hundred miles. The inland boundary is marked by the Strzelecki range and Australian Alps, stretching from Western Port to Mount Kosciusko; thence to Cape Howe along the boundary line which separates Victoria Province from New South Wales. The portion examined by Count Strzelecki, in 1840, from the Thompson river to the southward has a sea-coast of about 250 miles in extent, and comprises an area estimated at 5,600 square miles, of which about 3,600 consist of forests, plains, and valleys, which in richness of soil, pasturage, inland navigation, and situation, cannot, it is said, be surpassed. Two thousand square miles of the coast range are clothed with the blue gum and black butt trees of excellent quality, and contain many large and deep valleys, well adapted for cattle. The country is abundantly watered by numerous rivers, and by a navigable lake and lagoons which bisect the coast for 100 miles.

According to the Parliamentary Papers, No. 120 (9th March, 1841), containing the copy of a despatch by Sir G. Gipps, which shows the progressive discovery and occupation of New South Wales during the period of his administration, "Gipps' Land" begins at 17 miles S.S.E. from Lake Omeo, and is bounded on the N.E. by the meridian of 148°. In this report, Strzelecki says, that few of the parts explored presented him with more gratifying prospects than this division: a beautiful stream, the first of the eastern waters, winding through a fine valley, soon assumed the features of a river (the Thompson), and appeared to be a guide into a country hitherto unoccupied by the white man. A hilly country closes the valley, narrows the river banks, and brings the explorer across the mountain ridges to an elevation from whence there is a view of the sea on the distant horizon; to the south-east an undulating country, with mountain ridges to the north-east. Approaching or receding from the river according to the windings of its bordering hills, the descent into a noble forest tract is effected.

The valley of the Thompson river is separated from that of the M'Arthur, which is wide and covered with luxuriant pasture, and slopes gradually in open forest ground to Lake King and the sea-coast. From the M'Arthur river, a south-west course leads through forest and pasture country, crossed by several rivers, and intersected by hills clothed with timber; the coast range of mountains approaches nearer to the ocean, and narrows the expanse of forest into a vast valley. The magnificent prairies termed *Barney's Plains*, from thirty to fifty miles in extent, and bordered by copious streams, are surrounded by the most attractive scenery. The dividing range is continued in a south-east direction to Wilson's promontory, and presents some fine panoramic views. Viewed from Mount Gisborne, Gipps' Land is described by its explorer, as resembling a semi-lunar amphitheatre, walled from north-east to south-west by lofty and picturesque mountain scenery, and open towards the south-east, where it faces with its sloping area the uninterrupted horizon of the sea.

Most of the ranges between Gipps' Land and Western Port are of easy ascent and descent, none are rocky or of a precipitate character; and there are several facilities for opening this region, which may be termed the Switzerland of Australia, to the enterprize of the settlers. These ranges are nevertheless so densely covered with scrub, interwoven with grasses, and encumbered with gigantic trees, fallen and scattered in confusion, that Strzelecki, when passing from Gipps' Land to Western Port, was forced, in the route adopted, at its very commencement, to abandon his pack-horses

and collections; and not until after twenty-six days of incessant labour did he and his half-famished party succeed in extricating themselves from a situation in which they were in imminent danger of perishing. Such were the difficulties encountered on that occasion, that, with the utmost exertion, stimulated by the sense of peril, a progress of from two to three miles a day, was all that could be accomplished.

The honour of discovering this district is disputed with Count Strzelecki by Mr. M'Millan, overseer for the Messrs. M'Alister, of New South Wales, who in January 1840, made an expedition into an unexplored country, which, from its resemblance to his native land, he named *Caledonia Australis*, and in the following month wrote to his employers a somewhat detailed description concerning it. The result of Count Strzelecki's expedition was made known in July, but without attempting to decide the question of priority of discovery, the merit of acquainting the public with the existence of these fine pastures certainly rests with the Count.

There are three distinct descriptions of land in the Gipps Land district. The first consists of poor sandy soil and dense scrub; the second, of open forest, forming good pasture land; and the third, of the best quality for cultivation Of the first description, is the land along the sea coast, and also the higher mountains, which are, for the most part, covered with dense scrub, growing on masses of disintegrated granite or sand. The back country, generally, towards the base of the mountains that hem in the district, may be included in the second description: while the third comprises the alluvial soil, within two or three miles of the rivers, and a belt of five to twenty miles in breadth, generally along the lakes, from the Tambo river to Alberton. Dr. Lang thinks there are no less than 500 square miles = 320,000 acres, of these rich flats, unencumbered with timber, and ready for the plough; close to navigable water; so gently undulating, that hardly any change in the level is observable; with abundance of white, blue, and blackish limestone, from the vicinage of the snow-covered Australian Alps, and the southern coast of the Pacific, blessed with abundance of rain, and enjoying a cool but genial climate. The lakes are quite fresh in winter, and the rivers always so: but in February and March, the water of the lakes becomes rather brackish. It is, however, fit for stock; and pure water may, at any time, be obtained by sinking wells. Gipps Land furnishes considerable quantities of fat cattle, which are sent for sale to Van Diemen's Island; and an enterprising settler, Mr. M'Leod, has the contract for the supply of fresh meat for the government at Hobart Town (Van Diemen's Land.)

Alberton, the port of Gipps Land, in 38° 44′ S., 146° 41′ E., is situated on the left bank of Albert river, and within two miles of the Tarra river, which is to the eastward. It occupies a very important position, and is rising into eminence. Alberton is distant from the Latrobe river twenty-five miles; at this point, the road into the interior crosses the Latrobe, and a tram or wooden rail from Alberton, will open the inland communication. Steam-vessels are probably, by this time, plying between the Albert and Melbourne, a distance of 220 miles by the coast line.

Geology.—The principal geological feature in this division of Australia is the volcanic region, which extends over an area of 300 miles from east to west, and 100 to 150 miles from north to south. There are no volcanoes at the present time, but there are numerous craters, which by some are supposed to have poured forth their lava and fire while Southern Australia was still submerged beneath the Pacific Ocean. Of the number and size of these volcanic cones we have as yet no precise intelligence. Mount Leura, which is situated between lakes Timboon and Porumbeet, to the eastward of Lake Corangymite, is upwards of 600 feet in height, has about a fifth part of the rim of the ancient crater remaining; within the crater a conical hill has been formed, its summit nearly on a level with the exterior rim, and covered with trees and brushwood. The ascent towards the top of the mount is very steep. The sides are plentifully covered with scoriæ and fragments of rocks that have undergone the action of fire; but Dr. Lang, who examined the crater, did not observe any of the light pumice-stone, or cellular lava, which are found in such large masses in the volcanic region of the Mount Macedon district. Blocks of igneous rocks are seen for miles around Mount Leura, protruding from a deep chocolate-coloured soil, consisting chiefly of decomposed volcanic matter. From the summit of Mount Leura twelve volcanic cones are visible, and as many lakes, several of which were formerly the craters of other extinct volcanoes. Of these Mount

Eeeles, near Portland bay, is the most perfect; it has a small lake of fresh water at the bottom of the crater, much frequented by wild fowl; the lava which it formerly poured forth can be traced for ten miles. Mount Eeeles is fifty miles due west from Mount Shadwell; Mount Rouse (elevation 526 feet) thirty miles distant to the northward of west; and Mount Napier, a well-defined crater, is forty-five miles, nearly to the northward of west. Mount Napier is surrounded by sharp angular fragments of trap. These three mountains are all within a few miles of the 142nd degree of east longitude. It is therefore a region of great interest to geological inquirers, and a proper survey would add materially to the facts which are being registered in different countries in illustration of the changes this earth has undergone. Canada, New Brunswick, Nova Scotia, Prince Edward Island, and other colonies (of older establishment, it must however be remembered,) have each provided out of their local revenues the funds necessary for geological surveys of their respective provinces; and it is to be hoped that this important duty will not be long delayed in Austral-Asia, not only for the sake of science, but as a means of exploring the mineral treasures, and of becoming better acquainted with the qualities of the soil, in order to its more successful cultivation. Tracts termed *stony rises* exist in several districts; they are usually ranged around, or in the vicinity of, a volcano, and consist of innumerable hillocks or ridges of rocky fragments, varying in height from ten to fifty feet, crowded together in a confused manner, as if ejected from the neighbouring volcanoes. Mr. Westgarth is of opinion that they have been caused by some subterranean force at no great depth from the surface, which has raised up and broken into fragments the rocky covering previously spread by igneous action over a great extent of this part of Australia. Some of these *rises* are not stony, but smooth and covered with grass, and beneath the soil is a stratum of earthy limestone. The rock of the *stony rises*, which is of basaltic character, usually vesicular in structure, with a large admixture of iron, is probably beneath the earthy limestone strata. The rocks enclosing the singular valleys, containing the stagnant salt lakes near Mount Nicholson, are composed of basalt, and in an adjacent running stream it lies in blocks, forming small cliffs. The general character of the rocks in the province is vesicular trap, or cellular lava. The sides of many of the hills, particularly those of Mounts Elephant and Nanime, are covered with a vast quantity of heavy scoriæ, resembling the refuse of smelted iron.

Throughout the country traversed by Mr. Tyers, except where the formation was limestone or granitic, the magnetic properties of the rocks were so great, as to render the needle almost useless as a surveying instrument. In some cases, the deviation of the pole from the magnetic north was upwards of ten degrees. In his route from Melbourne, Mr. Tyers proceeded by Geelong, westward, to Mount Shadwell; thence to Mount Rouse; then north to Lake Linlithgow; then westerly to Yo-ho ponds; thence south to Mount Eckersley and Portland bay; and from thence along the coast to the Glenelg river. His return route was nearly on the same line, until he reached Mount Sturgeon, whence he travelled to Melbourne by Lake Bolac, at a distance of twenty to thirty miles north of his outward-bound route.

The Pyrenees terminate to the southward in Mount Cole, a lofty mass of granite, as do also the Australian Alps, Wilson's Promontory being of hard granite, about twenty miles long, by six to fourteen miles broad. There are immense surface masses of this formation at the distance of five and ten miles from Melbourne; said to equal that obtained near Aberdeen. The stone in some places bids defiance to the best tempered tools; but the manner in which the Chinese split the hardest granite into columns twenty or thirty feet long might be tried. They drill holes at short distances along the splitting line, and then insert dry spongy withs, or a reedy substance, which, on the application of moisture and heat divides the largest blocks into the thickness required.

Granite is found protruding in some places in the valley of the Glenelg river. It varies considerably in the size of its component parts, which sometimes, especially in quartz and felspar, exceed one foot square; and in this Sir T. Mitchell found distinctly imbedded friable masses, apparently of sandstone, but which on further examination were ascertained to consist of a very fine-grained grey granite, approaching in its character to mica slate. The bluff hill called Mount Cole consists of huge blocks

of granite, composed of pink felspar, white quartz, and silvery mica.

The base of the Bunninyong or Brisbane range is supposed to be schistus. Mount Bunninyong, its southern termination, 1570 feet in perpendicular height, is of volcanic origin. Mount Macedon is sienitic.

In a small marsh near Mount Macedon, about five feet below the surface, and immediately beneath a dark alluvium, about a foot in thickness, covered by a bed of yellow clay, of eighteen inches, on which rested a stratum of rich black soil, there were found, in 1846, the fossil bones of several extinct animals. Mr. P. Mayne was the discoverer, and they are described by Mr. M'Combie, a gentleman who has exerted himself with success in making the condition of the Australian colonies understood, and who is now the editor of the *Port Phillip Gazette*:—

"Amongst the bones found are the molar teeth, under-jaw part of a femur, humeris, and scapula, and other bones of a very large animal, resembling, in many of its anatomical characters, those of the mastodon. The molar teeth consist of the recurved transverse ridges, which were covered externally by a thick layer of enamel. The posterior ridge has, at its base, a small transverse prominence, covered by enamel, which ran parallel to the facet. The two ridges are united by an isthmus of crusta-petrosa, so characteristic of the mastodon. The largest of these teeth measured one inch eight lines transversely, and in an antero-postero direction, one inch six lines. The distance between the ridge of the crown and the extremity of the fang, in one of the largest specimens, was three inches six lines. The discovery of half an inferior jaw-bone, with the teeth *in situ*, gives the following dental formula:—incisors, 2; canines, 0; molars, 6; but this, however, requires other confirmatory observations. The enamel is arranged (with a very trifling difference) like that in the European and American species of mastodon, the mammilloid character of the tooth only being wanting; but the solitary incisor, and the isthmus of crusta-petrosa uniting the bases of the angular ridges of the molars, are highly characteristic of the mastodon. The largest bone, which appears to be the shaft of a thigh bone, has, unfortunately, both its articular extremities broken off; but from its broad and flattened character, it must have given support to a ponderous carcase. Its broadest part measured ten inches in circumference. The blade bone, or scapula, is also a large and strong bone, but so much mutilated as to have lost its features. Molar and incisor teeth, with other bones of a large species of kangaroo, exceeding by one-third, at least, the largest individual of the present macropus major, are abundant. This fossil is probably identical with that found in the Wellington caves by Sir Thomas Mitchell, and called by Professor Owen, macropus titan. Two incisor teeth of a huge rhodent were also found amongst these bones."

Mount Sturgeon, the southern extremity of the Grampians, is said by some to be a conspicuous mass of granite, and by other writers is described as consisting of a fine ferruginous sandstone, in which is imbedded a quantity of quartz; but between Mount Sturgeon and Mount Eckerley, twenty miles to the northward of Portland, and sixty miles in a direct line south-west of Mount Sturgeon, the rocks are chiefly trap, which indicates the volcanic character of the intermediate plain.

At the extremities of Mount Napier, in Normanby county, rough sharp-pointed fragments of cellular rocks are scattered about in heaps; the cells or pores are several inches in diameter, and, unlike amygdaloidal rocks, are all empty. The reefs at Portland Bay consist of a similar rock in rounded nodules, and a more compact trap rock, consisting principally of felspar, lying above them.

Near Cape Otway the sea-coast is of a sandstone formation; the cliffs attain, in some places, 100 feet in perpendicular height, and are studded with granite pebbles, like plums in a plum-pudding. About ten miles to the west of Cape Otway there is a remarkable cave, large enough to hold some hundred men, with a beautiful crystallized substance, formed by the dropping of water for years, and hanging from its centre, like a chandelier.

From Port Fairy to the Glenelg river, the country is of limestone formation, and, at these two places, nearly pure. The cliffs at Portland Bay are composed of an arinaceous limestone (containing oysters, and the exuviæ of other shell-fish), ferruginous sandstone, and trap. Over the limestone is a red clay, and a red pigment or ochre, used by the natives for painting their bodies. Half-way between the Glenelg river and Portland bay, on the south-east side of a lake, are cliffs of conglomerate, composed of quartz, trap, sand, and shells, about twenty feet high, in horizontal laminæ of an inch thick, with narrow vertical strata of pure lime. Fine-grained sienite has been found at Mount Henly station, on the Wannon river.

The country between the Murray and the vicinity of Lake Omeo shows, on an extensive scale, the primitive and secondary rocks: argillite and quartz rock on the one side to the east; old red sandstone, with conglomerates, on the other to the west; the petrosiliceous porphyry, as intermediate or transition rock, appears as if only to indicate their respective limits. The numberless streams of lava, the trachitic rocks, and others, which, through intense heat, have had some of their constituent ingredients

altered, give evident proofs of volcanic agency, to which Lake Omeo may have originally served as a laboratory.*

Mineralogy.—The volcanic character of the country indicates the presence of rich minerals, but, as yet, little attention has been paid to the subject. Copper and lead ore have been found on the banks of the Barwon river, in the Geelong district. The specific gravity of the lead ore is 6.4 per cent. Copper ore, lead, platina, and manganese, have been discovered along the coast from Point Urquhart to Moonlight Head, at Cape Otway. The ore runs in horizontal veins of four miles in breadth, varying from east-north-east to west-south-west. The specimens of copper ore collected in this district yielded, on an average, forty-five per cent. of copper.

The rivulets Merri and Darebin, in Melbourne district, are strongly impregnated with aluminous matter. *Ironstone* abounds in several districts, usually in the shape of pebbles strewed over a plain. Surveyor Hoddle, in his survey of the country near Melbourne, found that seventy-five per cent. of this stone consisted of iron ore; and so powerful was its effects upon the instruments of the surveyors, as to render it necessary to sell the sections of land at a certain number of acres, more or less, it being found impossible, in some situations, to obtain correct measurements. The sides of Mounts Elephant and *Nanime*, particularly those of the latter, are covered with a quantity of scoriæ somewhat resembling the refuse of smelted iron. These mounts bear every appearance of having had a volcanic origin; their form is that of a horse-shoe, open to the westward; the interior sides slope down almost to a level with the exterior bases.

Gold is reported to be plentiful in the Pyrenee mountains, distant about 100 miles from Melbourne. It is said to have been discovered by a shepherd lad, who, after selling his gold at the city, returned to seek for more; he was followed by some persons, and not having since been heard of, is supposed to have been murdered. Dr. Clutterbuck saw, in 1849, at the shop of Mr. Brentani, a watchmaker and jeweller, at Melbourne, several pieces of native gold—one lump, of great purity, weighing twenty-two ounces, exhibited minute portions of quartz, was soft in texture, easily cut with a knife, of uneven surface, somewhat oblong, and more than an inch in thickness, as if taken from a perpendicular fissure in the rock. Mr. Brentani is said to have a lump weighing seventy-two ounces. The commander of the ship *Berkshire*, which left Port Phillip for London, 25th February, 1849, purchased fourteen ounces of the native gold from Mr. Brentani at eighty shillings per ounce. Gold-dust has been found in the river *Plenty*, in the bed of the stream, which consists chiefly of mica. Quartz sent to England for analyzation, yielded twenty-eight ounces of gold for each ton of ore. The geological structure of Victoria province indicates the presence of the precious metals, which will probably be found extensively distributed.

Salt is obtainable in abundance from the waters of the interior lakes. Professor Faraday examined specimens of the waters collected from the salt lakes by Sir T. Mitchell, and stated that all of them were solutions of common salt, much surpassing the ocean, or even the Mediterranean, in the quantity of salt dissolved. Besides the common salt, there were present (in comparatively small quantities) portions of sulphates and muriates of lime and of magnesia; the waters, except in strength, very much resembled those of the ocean. Three drams of the waters of lake *Cockajemmy* yielded 113 grains of dry saline matter, others seventy-seven grains. A quantity of the salt deposited on the shores of Lake Bolac, analyzed by Dr. Anderson, of Edinburgh, gave the following results:—chloride of sodium (common salt), 99.654; sulphate of soda, 0.104; chloride of magnesium, 0.052; insoluble residue, 0.190; lime, a trace= 100.000. It was described as "a remarkably fine looking salt." When the summer heat has caused great evaporation, the bed of a lake is sometimes found quite dry, and covered with salt crystals to the depth of three or four, or even six inches, within the usual water mark. In the vicinity of Lake Corangymite, the settler has only to send a bullock-dray in the morning, with a few men, and it returns in the evening with a load of two tons weight. For the curing of meat, and the improvement of the soil, this mineral will be found very valuable.

These salt lakes are found in the region where there are several extinct craters. The production of salt is not unfrequently accompanied by volcanic action, as in Sicily and other places. Many of the rocks near the salt lakes of Australia are of the trap

* Report by Count Strzelecki to Sir G. Gipps.

formation; and Sir T. Mitchell states that a dark-coloured soil is found in the ridges about some of these lakes. I am disposed to think that the deposits of salt are obtained from the saline earth, rather than to agree with Sir T. Mitchell, that "the sea deposited the water in these situations at no very remote period." Some of the lakes have been filled again and again by rain and fresh river-water, but the summer evaporation annually leaves a fresh deposit of salt.

Very good limestone is quarried at Point Nepean, the head of the Port Phillip bay; and lime of fine quality, used as stucco for the outsides of houses, walls, and columns, is made from oyster and cockle shells, of which extensive beds are found around the bay. The whole of the coast line from the Glenelg river to Port Fairy (eighty miles) is of limestone formation, and this probably extends some distance into the interior. In the northern part of Alberton district there is a great quantity of limestone of various kinds, some white, some blue, and some black; and on the banks of the Mitchell river, about twenty miles from Lake King, there are large banks of oyster and other fossil shells under a thick layer of earth. A hill of marble was found by surveyor Stapylton near Mount Macedon.

Coal is found at Western Port, but no mine is yet worked. It is also stated to exist to an almost unlimited extent near Loutit bay, which is about three miles from Cape Otway. The coal lies in large quantities along that part of the coast.

The following abstract of the report of Mr. Cameron, who was deputed by the local authorities at Melbourne to examine the coal region at Western Port for her Majesty's government, dated November, 1840, will indicate the nature of the mineral found in this part of Australia:—

"Upon my arrival at Western Port, I commenced to examine minutely the several seams of coal which presented themselves superficially, lying to the eastward of the bay, which I found situated at such an angle of depression as to be wholly unworkable.

"There were four veins of coal, which were more or less associated with a soapy clay, sandstone, and greystone, and which varied in thickness from one inch to nearly three feet. Upon combustion, these coals emitted a very strong and fierce heat, depositing heavy bases, bearing a yellowish tinge or cast. From the tossed and shattered appearance of those several veins, an indication is manifested of the close affinity of some extensive dyke-fault or trouble, as dislocations in the coal strata are technically denominated.

"Having traced the coal measures throughout the direction of Cape Patterson, about twelve miles to the eastward of the port, I discovered various straggling open seams (termed the crops) of coal, varying in quality and thickness from two inches to four feet, and lying at such an angle as to be rendered available for mining. Here, as in Western Port, the coal is associated with greystone, sandstone, &c. In some, however, of the veins, the coal is of excellent quality, possessing a considerable proportion of bitumen, which would render it especially desirable for the purposes of gas, for exportation to Sydney, or for consumption at the towns of this province hereafter, when the public convenience of gas shall be introduced.

"The lofty and precipitous character of the rocks upon the coast exposed to view a section of strata which induced me to advance some miles farther than the strict line of my instructions directed. On approaching towards that part of the coast which inclines towards Cape Liptrap, I found the coal strata increased in thickness and regularity; but, from an accident which occurred to me at this period, whilst prosecuting my researches, I was precluded from following up my observations with a close examination. These were, nevertheless, sufficiently justificatory of my suggestion, that, in any future search for coals, this portion of the district should be minutely examined. The increased thickness and regularity of the measures strongly indicate, though not positively, the association of more extensive beds or seams of coal."

Mr. surveyor Smythe, who explored the south-east coast from Point Urquhart to within about fifteen miles of Cape Otway, says that extensive veins or seams of coal commence at a point thirty miles from the Port Phillip heads, and dip in every direction, the general bearing being north-north-west and south-south-east. The mineral seems to abound over a considerable extent of country. It is described as "in large seams of four feet in thickness, extending from 400 to 600 feet in length; as burning well, with little or no smoke, and leaving a fine white ash, resembling the purest description of cannel coal."

Soil.—An earth formed of decomposed lava has in every country been found to possess extraordinary fertility. In the West Indies, in Sicily, and other countries, where volcanoes are in full activity, the inhabitants brave the dangers of the burning lava, on account of the richness of the surrounding region. A large part of the territory between Melbourne and Portland (nearly 200 miles) is of the dark chocolate-coloured soil, peculiar to a volcanic country; it is not surprising, therefore, to hear of wheat attaining a height of seven feet, and yielding sixty to seventy bushels per acre; oats, ninety bushels per acre; maize, 100; and other crops an equally valuable return for the labours of the husbandman. To the west-

ward of Geelong, for a distance of nearly 200 miles, there is an almost continuous succession of whinstone and other allied rocks, affording the basis of a soil which usually characterizes a rich agricultural country. Over this extensive region the extinct volcanoes give a picturesque variety to the well-grassed plains, the clumps of timber upon hill and dale, and the long lines of gum trees that mark the courses of the winding creeks. This country is being rapidly occupied.

Mr. Malcolm, an extensive settler and stockowner in Australia, in his evidence before a committee of the New South Wales Legislative Assembly, in 1845, stated that he had travelled extensively in England and Scotland, and had seen large tracts of land in the Port Phillip province as rich as any he had seen in Great Britain. The district of Lake Colac, for about 200 miles, is "as good land as ever plough was put in." There are thousands of acres adjoining Lake Colac clear of timber. Keeping the south side of the lakes, the country, all the way from Colac lake to Port Fairy, Portland Bay, and the Glenelg river, is a fine grazing country; a great part of it is too rich for sheep. The land north of the lakes is said not to be so good; but still well adapted for stock.

In the splendid country between Geelong, Lake Colac, and the Glenelg river, there is a soil unsurpassed in point of fertility. The tracts suited for cultivation are not confined to the banks of rivers or creeks, but extend generally in all directions, and the rains being regular, and the country not subject to drought, the pasturage throughout the year is perfectly sufficient to feed stock without artificial food, and to produce fat cattle, unsurpassed in any other part of the world.

In the district of Lake Colac, and around Mount Leura, there is much land, of which the natural pasture would maintain a bullock an acre all the year round; whereas the best land in Somersetshire, England, is allowed to be only capable of sustaining a bullock and a sheep for seven months, the animals being stall fed during the other five.

The richness of the soil is seen in its vegetation; Dr. Clutterbuck says that the daisy, buttercup, and the pretty but inodorous violet, are seen everywhere; the *Floræ* are exceedingly beautiful, and, in the spring, literally carpet the ground; the wild geranium, a diminutive plant bearing a tiny pink flower, grows abundantly; two most lovely creepers are found growing in every variety of soil—one bears a brilliant scarlet flower not unlike the laburnum in shape, the other has tufts of a blue colour, resembling the double violet; the balmy perfume of the golden and silver wattle (the mimosæ tribe) is exhaled far and near; the brunonia, bearing a flower in colour like ultramarine, in many places covers the surface with "nature's most exquisite embroidery;" the musk plant and hyacinth are indigenous; the English pelargonium and fuschia blossom throughout the greater part of the year; and European vegetables and fruits attain a size "which would excite astonishment in the mind of a Covent-garden fruiterer."

In most parts of the district finely open and undulating ground is to be found, adapted to the wants of the grazier and agriculturalist; in very many a rich black soil from eight to twelve inches in depth prevails, containing much decomposed vegetable matter with an argillaceous soil. Where this occurs, the valleys are composed of extensive, verdant, and fertile flats of vegetable mould. In some situations the soil is red, in others, a clayey hazel loam. The greater number of soils contain large portions of sand of various degrees of depth and fineness, and hence acquire the property of powerfully absorbing the rays of the sun. Admitting that some portions of the country are boggy, and a proportion sandy, rocky, and barren, yet, "millions of acres of good arable land are to be met with."*

Climate.—The position of Victoria, to the southward of New South Wales, gives it a cooler climate than the more northern province. Fires are agreeable mornings and evenings, for eight months of the year. There is sufficient frost to freeze the surface of ponds for three or four days in winter (July), and snow falls occasionally on the low lands. The changes of temperature are occasionally rapid, but the "hot winds" are annually of brief duration. Port Phillip resembles, in its summer season, Baden, Marseilles, and Bordeaux; its winter, Palermo or Buenos Ayres; its fluctuations of temperature, those of Montpellier, and its annual mean is that of Naples. According to Count Strzelecki, the annual mean temperature of Port Phillip, is 61.3; mean for summer, 69.4; for winter, 53.3; summer maximum, 90.6; summer minimum, 48.8; winter maximum, 69.8; winter minimum,

* *Port Phillip in* 1849; by Dr. Clutterbuck, nine years resident in the colony.

36.9. *Warmest* month, November; *coldest*, July. The mean annual temperature is rather more than 61°, or about 12½° higher than the mean temperature of Croom's Hill, Greenwich, England. In the reading-room of the Mechanics' Institute, at Melbourne—fronting the south, and free of the sun—the thermometer, in the hottest summer, rarely exceeds 75° Fahrenheit. The summer evenings are in general clear and cool; the "hot wind" seldom has longer duration than one day; and the number of heated wind days in summer, is about twenty, of which, one-third are oppressively hot; but in a well-constructed brick or stone dwelling, with proper care to prevent the ingress of the heated draft of air, but little disagreeable sensation is experienced. For ten months in the year, says Mr. Westgarth, the climate is unexceptionable; "the dryness and genial warmth of the air afford an almost daily access to the open country, and there appears, in the general buoyancy of the population, a degree of enjoyment of existence far beyond what is usually exhibited in the duller climes of the fatherland." In the western parts of the province, where Tasmania does not intercept the breezes and clouds from the great southern ocean, the temperature is lower, and the annual quantity of rain greater than at Melbourne. For the following table I am indebted to Mr. Westgarth, a merchant at Melbourne, who has materially contributed by his writings to the advancement of the province which he has adopted as his home:—

Meteorological Register for Melbourne, 1845–6, 130 *feet above the level of the sea; lat.* 38° 18′ *S.*

Months.	Thermometer.			Barometer.			Rain.		
	8½ A.M.	2¼ P.M.	Wet Thermometer.	Highest.	Lowest.	Mean at 2½ P.M.	Number of Days.	Inches fallen.	Maximum in one day.
July . . . 1845	50.29	55.48	53.25	30.43	29.55	29.98	16	5.50	1.81
August . . „	—	57.38	53.77	30.22	29.48	29.72	—	1.36	—
September . „	56.10	63.50	59.66	30.45	29.52	30.05	9	1.27	0.76
October . „	58.83	65.38	60.77	30.24	29.62	30.00	10	2.34	1.12
November . „	61.70	69.00	64.53	30.08	29.50	29.78	15	3.99	1.42
December . „	65.03	73.09	66.74	30.10	29 61	29.82	3	0.17	0.11
January . 1846	66.19	73.48	66.41	30.10	29.66	29.36	5	2.12	1.01
February . „	63.85	72.32	65.67	30.23	29.61	29.83	6	1.67	1.13
March . . „	61.83	68.74	63.09	30.19	29.66	29.92	6	1.30	0.92
April . . „	57.13	64.20	60.30	30.20	29.55	29.89	11	2.27	0.35
May . . . „	50.64	56.12	54.54	30.30	29.54	29.91	17	3.79	1.02
June . . . „	46.96	54.70	52.56	30.31	29.70	30.09	11	1.20	0.32

Note.—No Thermometrical return obtained for August at 8½ A.M.

The "hot winds" generally commence about the middle or end of November, and recur, at intervals, throughout the summer, until towards the end of February. At Melbourne, the hot wind has a N.N.W. direction during the summer; but the winds from the same quarter, in winter, are cold. During the prevalence of the hot winds, the sky is generally cloudless: the warmth materially abates after sunset. The scorching blasts are succeeded by a strong breeze from the southward, which occasions a fall in the thermometer of twenty to thirty degrees. During winter, snow sometimes covers the ground to the depth of three inches, and ice is formed of the thickness of a shilling. It will be observed, that more rain falls at Melbourne than in London. By means of the Australian Alps any desirable degree of cold may be obtained even in summer.

The climate of Victoria, as well as that of New South Wales, is occasionally deteriorated by a disease known as "*catarrh*," which breaks out in some localities among the sheep, and will destroy in three or four weeks, four or five thousand sheep in a flock. There does not seem to be any mode of checking the disease; and when it occurs, the flock-master has to resort to the "boiling down" system. The "scab" and "foot rot," also cause mortality in sheep, and there are stringent colonial laws to prevent the disease called "scab" spreading; sheep are prohibited being driven on the common roads, except in the month of February; notice must be given of the disease; and other stringent regulations must be adopted, subject to penalties of £10 to £20 for neglect. Licensed butchers are liable to be fined for slaughtering or exposing for sale infected sheep.

CHAPTER III.

POPULATION—EDUCATION—RELIGION—GOVERNMENT AND INSTITUTIONS.

Population has been extraordinarily augmented; the comparative progress of increase in the inhabitants is thus shown, between the years 1836 and 1850:—

Places.	1836.	1841.	1846.	1850.
Melbourne, city. . .	—	4,479	10,954	15,000
Country districts . .	224	7,259	21,921	35,000
Total	224	11,738	32,875	50,000

Note.—The population for 1850 is only estimated.

The *nationality* shows that, of the total population in 1846, there were born in the colony, 3,855 males, 3,728 females; in England, 7,407 males, 2,693 females; in Wales, 83 males, 38 females; in Ireland, 5,037 males, 4,089 females; in Scotland, 2,757 males, 1,468 females; in other British dominions, 800 males, 603 females; in foreign countries, 245 males, 76 females. Total, 20,184 males, 12,695 females = 32,879. The *classification of occupations* shows in commerce, trade, &c., 2,254; agriculture, 1,722; grazing—management, *of sheep*, 4,666; *of horses and cattle*, 1,334; horticulture, 178; other labourers, 2,673. Mechanics and artificers, 3,635; domestic servants, 1,201 males, 2,136 females; clerical profession, 29; legal ditto, 96; medical ditto, 106; other educated persons, 476. All other occupations, 1,983. Residue of population, 25,232. The *civil condition* in 1846 was, free-born in the colony, or arrived free, 17,553 males, 12,488 females; other free persons (meaning thereby those who had formerly been prisoners), 2,363 males, 202 females. *Bond*, holding tickets of leave, 230 males, 5 females; in government employ, 18 males; in private assignment, 20 males.

The prison population had its origin in the circumstance of the Port Phillip province being a district of New South Wales. The inhabitants have been very strongly adverse to the introduction of convicts, and recently the superintendent, Mr. Latrobe, was necessitated to prevent the debarkation of prisoners from two ships which had been despatched direct from England with convicts who had gone through a large probationary period in penitentiaries in the United Kingdom. The feeling evinced against the introduction of criminals, however great may have been their alleged reformation, was quite as strong as that exhibited by the inhabitants of the Cape of Good Hope. By this time (June, 1850) there is, most probably, no trace in Victoria province of the convict system.

We have no returns of the number of the aborigines within the limits of the province. Their respected "Protector," Mr. Robinson, during various journeys, found on the banks of the principal rivers a comparatively dense aboriginal population. There are several mixed breed, or "half castes," of both sexes.

According to the census of 1846, the white population was thus distributed:—

County or District.	Males.	Females.	Total.
Bourke County . .	9,440	7,890	17,330
Grant „ . . .	2,359	1,531	3,890
Normanby „ . . .	1,455	812	2,267
Gipps Land District .	612	240	852
Murray „ . .	1,142	416	1,558
Western Port „ . .	2,516	1,009	3,525
Portland Bay „ . .	2,675	798	3,473
Total . . .	20,199	12,696	32,895

The key, with numbers attached to the excellent map of Mr. Ham, published at Melbourne in 1847, gives the names of the landed proprietors, and of the squatters in each division. In *Bourke county* the number of proprietors was then 69; in *Grant county*, 72; in *Normanby county*, 72; in *Western Port district*, 192; the *Murray district*, 149; *Wimmera district*, 67; *Portland Bay district*, 232; and *Gipps Land*, 44. Mr. Ham adds a district which he terms the *Tumut district*, between the Murray river and the Murrumbidgee, but this region belongs to the territory of New South Wales.

Melbourne city is divided into four wards; in 1846 each ward was thus tenanted:—

Name of Ward.	Males.	Females.	Total
Gipps	1,738	1,602	3,340
Bourke	976	929	1,905
Lonsdale	1,481	1,176	2,657
La Trobe	1,557	1,495	3,052
Total . . .	5,752	5,202	10,954

Of the population of the city of Melbourne in 1846, there were—born in the colony, or arrived free, males, 5,551; females, 5,161: other free persons—males, 218; females, 38. *Bond*—holding tickets of leave, males, 18; females, 1: in government employment, males, 7.

The town population, irrespective of Melbourne city, is now increasing, and affords a good indication of augmenting prosperity. The various eligible positions on the coast, and on the interior rivers for maritime and military stations, will cause an equable diffusion of wealth and civilization over the province

The following table shows the population, by ages, throughout the province:—

Abstract of the Population on the 2nd March, 1846, in each of the Counties and Commissioners' Districts.

Counties.	Males.					Females.					Totals.		General Total.
	Under 7 Years.	7 and under 14.	14 and under 21.	21 and under 45.	45 and upwards.	Under 7 Years.	7 and under 14.	14 and under 21.	21 and under 45.	45 and upwards.	Males.	Females.	
Bourke	2518	962	538	4843	579	2495	917	680	3512	287	9440	7891	17331
Grant	515	153	135	1377	159	500	152	148	680	51	2339	1531	3870
Normanby	182	98	61	935	79	283	91	45	369	24	1455	812	2267
Total	3315	1213	734	7155	817	3278	1160	873	4561	362	13234	10234	23468
Commissioners' Districts, beyond the Limits of Location.													
Gipps Land	98	32	36	390	56	81	24	19	107	9	612	240	852
Murray	169	40	31	810	92	139	32	30	205	10	1142	416	1558
Portland Bay	275	80	72	2117	133	289	50	27	418	15	2677	799	3476
Western Port	354	135	116	1726	188	367	86	52	463	38	2519	1006	3525
Total	896	287	255	5043	469	876	192	128	1193	72	6950	2461	9411
Total Population	4211	1500	989	12198	1286	4154	1352	1001	5754	434	20184	12695	32879

Abstract of the Population on the 2nd March, 1846, in the City of Melbourne, and in each Town and Village.

Towns and Villages.	Males.					Females.					Totals.		General Total.
	Under 7 Years.	7 and under 14.	14 and under 21.	21 and under 45.	45 and upwards.	Under 7 Years.	7 and under 14.	14 and under 21.	21 and under 45.	45 and upwards	Males.	Females.	
Melbourne (city)	1,561	617	331	2,959	286	1,608	592	480	2,346	174	5,754	5,200	10,954
Ashby*	28	6	—	43	2	26	6	5	30	4	79	71	150
Belfast*	36	8	5	89	13	40	5	7	63	3	151	118	269
Brighton*	117	28	9	106	12	65	38	16	111	7	272	237	509
Brunswick*	23	10	5	38	9	23	9	9	31	7	85	79	164
Geelong (North)	111	35	40	580	28	107	45	43	180	13	594	388	982
Geelong (South)	48	20	7	101	12	70	19	18	85	8	188	200	388
Irishtown*	28	4	2	34	3	23	4	7	29	1	71	64	135
Newtown*	53	6	5	59	4	44	14	11	57	3	127	129	256
Portland	68	26	8	163	13	80	35	13	100	4	278	232	510
Richmond*	62	20	8	82	13	74	30	14	93	6	185	217	402
Williamstown	45	14	8	93	12	58	9	11	70	2	172	150	322
Total urban Population	2,180	794	428	4,147	407	2,218	806	634	3,195	232	7,956	7,085	15,041

Note.—The mark (*) attached to the name of any town or village, indicates that it is situated on private property.

The population, by ages, of the province was:

Years of Age.	Males.	Females.
Under 7	2,689	4,154
7 and under 14	1,500	1,352
14 „ „ 21	989	1,001
21 „ „ 45	12,198	5,754
45 „ „ 60	1,122	393
60 and upwards	164	41

In 1846, the population in the following towns is thus shown:—

Name of Town.	Males.	Females.	Total.
Geelong	1,149	916	2,065
Belfast	359	242	601
Portland	278	232	510
William's, about	—	—	250
Alberton „	—	—	100

Proportion of married to single in 1846:—

Counties and Districts.	Married.		Single.	
	Males.	Fem.	Males.	Fem.
COUNTIES:—				
Bourke	3,264	3,383	6,196	4,507
Grant	716	696	1,623	835
Normanby . . .	—	—	—	—
DISTRICTS:—				
Portland Bay . .	402	403	2,273	395
Western Port . .	506	474	2,011	534
Murray	224	222	918	194
Gipps' Land . . .	107	114	505	126
TOWNS:—				
Melbourne . . .	2,107	202	3,665	3,000
Geelong	274	256	507	333
Portland	101	99	177	133
Belfast	101	107	251	135

Note—There are no returns for Normanby.

The total married was—males, 5,564; females, 5,656: unmarried, males, 14,620; females, 7,039. *Bond* population in 1846: holding tickets of leave, males, 230; females, 5: in government employment, males, 18; in private assignment, males, 20 = 268.

Religious denominations.	1841.	1846.
Church of England . . .	6,190	14,921
„ Scotland . . .	2,044	5,856
Wesleyan Methodists . .	650	1,597
Other Protestant dissenters	346	1,169
Roman Catholics . . .	2,441	9,075
Jews	57	117
Mahomedans and Pagans .	10	27
Other persuasions . . .	—	117

In 1847 the province was divided into sixty-nine parishes.

Number of houses in 1841 and 1846:—

Year.	Stone or Brick.	Wood.
1841	450	1,040
1846	1,835	3,363

The number shingled, *i.e.* roofed with small pieces of wood, was, in 1846, 3705; and of slated, 76. The number of houses finished was 4,547; unfinished, 651; inhabited, 5,070; inhabited, 128.

There is an abundance of the necessaries of life, and great comfort among all classes of the people. Dr. Clutterbuck, the most recent authority on the state of the colony (1849), in evidence of the condition of the working classes there, points "to the cottage of the mechanic or daily labourer, each surrounded by his family of children; on the breakfast table are seen a large dish of rumpsteak, or mutton chops, eggs, fresh butter, excellent bread, and tea or coffee; the dinner table is equally bountifully supplied, the cup foaming with colonial ale, being a never-failing accompaniment, tea and a substantial supper succeed. Think of these things, ye suffering poor at home. Fancy yourselves also strolling in the bush, and arriving at a station where, on some occasions, you see fore-quarters of mutton lying about in a state of putridity, and ask yourselves the question—'whence this shameful waste of the bounties which God has given?' and obtain the reply of the master—'our men refuse to eat this portion of the animal, and owing to the scarcity of labour we are compelled to submit to their dictation.'"*

The weekly rations allowed to shepherds or hut-keepers consist of flour, 10 lbs.; meat, 12 lbs.; tea, ¼ lb.; sugar, 2 lbs. It is computed that the cost of maintenance for a man is five shillings per week. The duty of the *hut-keepers*, of whom there is usually one to each flock, is to shift the hurdles daily, prepare the daily meals for the shepherds, and watch the sheep by night from a little "crib box." One shepherd usually attends 1,000 sheep; but in an open country one man may have 1,500 or 2,000 confided to his care. According to Dr. Clutterbuck the current rate of wages, in addition to rations, given by squatters in 1849, was—shepherds, £20 to £25; hut-keepers, £18 to £22; bullock drivers, £24 to £28; married couples, with a family, £25 to £30; ditto, without encumbrance, £34 to £40; single females, £16 to £20; wheelwrights, £25 to £30; carpenters, £30 to £40 sterling per annum. Farm servants, 10*s.* per week; sheep shearers, 10*s.* to 13*s.* for every 100 sheep; or without rations, 15*s.* per 100 sheep. The town rates of wages are—female cooks, £18 to £24; men ditto, £20 to £28; housemaids, £16 to £18; nurses, £12 to £16; grooms, £25 to £32; laundresses, £20 to £28 sterling per annum. Charwomen, 2*s.* 6*d.* to 3*s.*; and needlewomen, 1*s.* per day. Washing, 2*s.* 6*d.* to 3*s.* per dozen.

Retail Prices of various Commodities.—Beef and mutton 2*d.*, veal and pork 5*d.* to 6*d.*, bacon 8*d.* to 1*s.*, tea 1*s.* 6*d.* to 3*s.*, sugar (fine moist) 3*d.* to 4*d.*, butter 10*d.* to 1*s.* 2*d.*, cheese 7*d.* to 8*d.* per lb.; ale (colonial), 5*d.* per quart; bottled ale and porter (English), 10*s.* to 12*s.* per dozen; flour (fine) £10, seconds £9, per ton; wheat, 3*s.* to 5*s.* per bushel; potatoes, 3*s.* to 4*s.* per cwt.; milk, 4*d.* per quart.

In the year 1840, flour was sold for £90 per ton; bread, 2*s.* 6*d.* the quartern loaf;

* *Port Phillip in* 1849, p. 108. London: 1850. Parker, West Strand.

butter, 3*s*. per lb.; cabbages, 6*d*. each; potatoes, 1*s*. per lb. Dr. Clutterbuck says that at this period he employed labourers, in the erection of a house, at a cost of 15*s*. per day each; but then he adds, "port and champagne were among the ordinary luxuries of the artisan."

Education.—According to the decision of the governor of New South Wales respecting education, it was ordered, on the 24th of September, 1841, that in towns or places of which the population amounts to 2,000 or upwards, local government aid be given for education, to any school, at a rate not exceeding one penny each day for the actual attendance of every child in the school, whose parents or friends are in such a station of life as to render it necessary to extend to them the assistance of government. Where the population does not amount to 2,000, the aid afforded may be as high as one penny farthing per diem, or one penny halfpenny, if there be no other receiving aid from government within five miles. The government aid cannot exceed the sum raised for the support of the school from private sources, nor be in excess of £25 per quarter, unless the number of children attending the school, or the poverty of their parents, be such as to make a special exception in favour of it necessary.

School inspectors, appointed by government, visit the different schools in their respective districts at uncertain times, but never less than twice in every month, muster the children, and compare the numbers present with the numbers entered on the registers of daily attendance kept by the masters or mistresses of the schools. The inspectors report to government any irregularity or misconduct which may fall under their notice. Police magistrates act as inspectors of schools. Quarterly lists are required by the government from each school, containing the names of all children who attend the school, their ages, and also the names, places of abode, trade or calling of their parents or nearest friends.

A diocesan grammar school has been recently established at Melbourne, through the instrumentality of the bishop. The annual fee is £10 10*s*.; entrance fee, £2 2*s*., and £1 1*s*. for every additional boy of the same family. The school is open to all persons without distinction, and the object is to give a sound scriptural and general education. There are also two private schools for girls, and two for boys at Melbourne.

There are about forty schools, with 5,000 pupils, in different parts of the province.

In 1846, the state of education, according to the census of that year, was as follows:—

State of Education.	Males.	Females.	Total.
Under 21 years.			
Cannot read . . .	4,005	3,863	7,868
Read only	1,052	1,138	2,190
Read and write . .	1,643	1,506	3,149
Above 21 years.			
Cannot read . . .	1,797	988	2,785
Read only	1,484	1,274	2,758
Read and write . .	10,203	3,926	14,129

Religion.—The contrast between the earlier and present state of society, is very visible; a higher moral tone is gradually spreading in the community, and this improvement, in the estimation of many, dates from the arrival (in January, 1848) of the bishop, "one in whom are united the highest learning, humility, and piety." Heretofore the people at the distant stations in the interior, had existed in almost a heathenish state; the good bishop has ridden many hundred miles to exhort, and instruct, to celebrate the holy rites of baptism and confirmation, and to administer the blessed sacrament. His lordship was accompanied from England by three clergymen, has ordained four more since his arrival, and as fast as practicable, is locating ministers of the Gospel at eligible stations in the country. Prior to the arrival of the bishop (Dr. Perry, formerly district preacher of St. Paul's, Cambridge) only one clergyman had been appointed by government to superintend the Church of England in this large district. From 1840 to 1848, this zealous man (the Rev. Adam Compton Thompson) had to perform the whole of the duties, and has been known in *one day* to perform the burial service over six persons, the marriage ceremony for three couple, to baptize four children, and to visit the sick in Melbourne and its suburbs. It cannot be denied that grievous neglect has been evinced in this matter, for primary functionaries in a colony founded by a Christian people, before the appointment of judges, magistrates, police, and custom-house officers, ought to be the ministers of the Gospel.

The efforts recently made by the British government for the protection and instruction of the aborigines of Australia, is highly creditable. During the secretaryship of Lord Glenelg, the appeals of the London Aborigines Protection Society were received

with attention, and protectors were appointed to watch over, instruct, and if possible convert to Christianity the dark-coloured migratory races among whom we have established ourselves. The Port Phillip territory is divided into districts, in each of which is placed an assistant protector, and a medical officer, or assistant, with a homestead, and reserve of land, for the exclusive use of the aborigines. Agricultural operations are now carried on by the natives. Those who are able are expected to give an equivalent for what they receive; the sick, aged, and young children are rationed. A missionary is appointed to each establishment, an overseer to superintend agricultural operations, and a constable, to keep order. The salary and allowances of the protector-in-chief are £600 per annum. The salary of the assistant-protector is £250 per annum, and ten shillings and sixpence a day allowance. They are to travel among and sojourn with the native tribes, and by every means in their power endeavour to induce them to adopt a settled mode of existence. They are required to furnish statistical and other information connected with the native tribes of their respective districts; the boundaries and aboriginal names of districts occupied by each tribe, the differences of language, customs, and habits, the names of mountains, lakes, rivers, and other localities; a census distinguishing the number of each family, name, age, sex, tribe, and chief of tribes, whether warrior, councillor, or elder, &c. The Port Phillip province is divided for the above-named purposes, into four districts, viz., the Goulburn River, Mount Macedon, Portland Bay, and Western Port, or Melbourne district. At the homestead on the Goulburn river, 110 miles from Melbourne, the aborigines had, in 1842, cut down, grubbed up, and burned 450 acres; cleaned and broken up for cultivation, about twenty acres; and obtained good crops of wheat, oats, and barley, and about two tons of potatoes. They have built good houses for the assistant protector, medical officer, and overseer, and constructed huts for themselves. The women manufacture baskets, mats, string, &c.

The Newspaper Press of the province is coeval with the formation of the settlement, for a newspaper seems nearly as essential to an Englishman as the air he breathes.

The first newspaper, in 1836, appeared in manuscript; the enterprising projector, however, quickly obtained from Van Diemen's Land the requisite materials wherewith to print it, and it appeared under the title of the *Port Phillip Patriot*. In the early part of 1837, the *Port Phillip Gazette* was issued, edited by Mr. Arden; and soon after a third appeared, styled the *Port Phillip Herald*. Each of these journals was issued bi-weekly, by which arrangement the colonists had even then the opportunity of having a newspaper on their breakfast tables every morning. Four newspapers are now issued at Melbourne daily (Sundays excepted), namely, the *Morning News, Daily News, Patriot,* and *Argus*. At Geelong the *Advertiser* is issued daily, and the *Victoria Colonist* I believe weekly. These papers are as large as the *Globe* or *Standard*. The copy of the *Argus* before me (Vol. ii. No. 106, July 11, 1849) contains fifteen columns of advertisements. The "*editorials*" of those papers, their "*original correspondence*," poetry, and selected articles, typography, and paper, place them on a par with the journals of the United Kingdom, except the leading metropolitan newspapers. The price of these daily Port Phillip papers is fifteen shillings per quarter, or sixpence for a single copy; for advertisements, six lines and under, three shillings, for every additional line three pence. The Portland district has three ably conducted newspapers, two printed and published at Portland and one at Port Fairy. A *Port Phillip Magazine*, and other periodicals, still further attest the rapid extension of the "fourth estate," whose progress is indeed unequalled in any other portion of the British Empire.

Government.—Under the provisions of the bill now before Parliament, Victoria will have a government appointed by the crown, and a Legislative Assembly similar, in constitution, to that of New South Wales, and the other Australian colonies. It is uncertain whether any alterations will be made in this bill in the House of Lords; and therefore it is unnecessary to give any other details than those already given. (See p. 550.) It is understood, that her Majesty's ministers do not now propose to vest the control of the waste or crown lands in the Australian legislatures, which conforms to the opinion I ventured to express in the published division of this work on New South Wales. (See p. 554–5.)

The Laws, are the same as in England; and administered, as in New South Wales, by a judge and supreme court.

Institutions.—Several charitable, religious, literary, and benevolent societies, such

as have been described in the previous colonies. Among other associations, may be mentioned a Mechanics' Institution at Melbourne, and another at Geelong; an Auxiliary Bible Society; a Theological Education Society; Temperance Society; Harmonic Society; Union Benefit Society; Independent Order of Odd-Fellows; a Commercial Exchange; an Auction Company; Fire and Marine Insurance Company; Port Phillip Steam Navigation Company; public hospital, &c. The *Port Phillip Bank* was wrecked in the general disasters of 1842–3. The proprietary of the Port Phillip Bank, in 1840–1, elected me a London director, and I recommended a course of proceedure which met the approval of their intelligent agent in London, Mr. Gardiner, but it was not followed in the colony. There are branches of the *Union Bank of Australia*, and of the *Bank of Austral-Asia*, which are stated to be conducting a profitable business.

CHAPTER IV.

PRODUCTS—WOOL, LIVE STOCK, TALLOW, PRESERVED MEAT, WINE, FLAX, TIMBER FISH, &c.—COMMERCE—IMPORTS—EXPORTS—REVENUE—EXPENDITURE—LANDS—EMIGRATION AND SQUATTING INTERESTS.

Products.—The first in value, and present importance, as in New South Wales, is wool. The quantity imported into the United Kingdom, from Port Phillip and Portland Bay, since 1846, previous to which period many of the Port Phillip and Portland Bay wools were shipped for England, *via* Van Diemen's Island, was in 1846, 20,956; 1847, 27,876; 1848, 37,351; 1849, 45,348 bales. The bales average about 280 lbs. each. The exports of wool from Victoria province to the United Kingdom, in 1849, amounted to 12,697,440 lbs. The total imports of wool into the United Kingdom for the same year, were 298,444 bales, of which Port Phillip and Portland Bay contributed nearly one-sixth part. Sydney sent 50,584; Van Diemen's Island, 17,926; South Australia, 10,100; Western Australia and New Zealand, 1,474 bales. The total exports of wool from the Austral-Asian settlements during the past year, consisted of 125,732, or nearly one-half the entire importations into the United Kingdom; while, in 1812, only *three* bales were imported from Australia. The progress of the wool trade is so remarkable—the augmented importation has such an important influence on one of the largest branches of English manufacture—on the domestic comfort of the people—on the extension of our foreign commerce, and on the increased employment of shipping, that I am induced to give the following statement of the quantities of wool imported from our various colonies, and from different foreign countries, for the past half century, and for which I am indebted to the respected wool brokers, Messrs. C. and I. D. Jacomb, of Basinghall-street, London. It will be observed, that the imports from Spain and Germany, our former great sources of supply, have materially decreased of late years, while the production of our colonies has largely and steadily increased.

The augmented supply has reduced the price of all wools; Port Stephens fleeces, that a few years since fetched 5*s.* to 6*s.* a pound, do not now bring more than 2s. In the London price-currents the Australian wools are distinguished by the words—Sydney, Port Phillip, Van Diemen's Land, Adelaide, Swan River, and New Zealand, to represent the different colonies. The usual classification of the qualities of the wool, and the range of price will be seen in the following extract from the London sales for May, 1850, of wools from Port Phillip, which, although improving, are still inferior to the Sydney wools, but superior to those from Van Diemen's Land, or from Adelaide:—Extra flocks, in first-rate condition, 1*s.* 8*d.* to 1*s.* 11½*d.* per lb.; good flocks, in fair condition, 1*s.* 6*d.* to 1*s.* 8*d.*; average do., 1*s.* 3½*d.* to 1*s.* 6*d.*; ordinary and ill-conditioned flocks, 1*s.* 2*d.* to 1*s.* 3½*d.*; scoured clothing, 1*s.* 6*d.* to 2*s.*; scoured lambs', 1*s.* 7*d.* to 1*s.* 10½*d.*; handwashed and ordinary skin, 1*s.* 1*d.* to 1*s.* 4½*d.*; lambs' good, 1*s.* 6*d.* to 2*s.* 2*d.*; lambs' inferior to average, 1*s.* 2*d.* to 1*s.* 6*d.*; locks, broken, &c., 10*d.* to 15½*d.*; in grease, 8*d.* to 1*s.*

Importation of Wool in Bales into the United Kingdom during the following years.

Years.	Sydney.	Van Diemen's Land.	Port Phillip.	South Australia.	W. Australia & N. Zealand.	Cape.	East India.	German.	Spanish.	Portugal.
1796	—	—	—	—	—	—	—	41	16,699	412
1797	—	—	—	—	—	1	—	394	24,330	69
1798	—	—	—	—	—	—	—	622	10,219	541
1799	—	—	—	—	—	—	—	2,342	14,752	6,366
1800	658	—	—	—	—	—	—	1,170	30,318	9,622
1801	1,302	—	—	—	—	85	—	598	26,989	5,015
1802	353	—	—	—	—	146	—	1,217	28,237	2,751
1803	18	—	—	—	—	78	—	680	21,778	1,280
1804	164	—	—	—	—	7	—	62	34,962	230
1805	1,203	—	—	—	—	—	—	67	34,298	1,113
1806	564	—	—	—	—	—	—	1,953	27,228	1,666
1807	74	—	—	—	—	7	—	548	51,458	1,645
1808	128	—	—	—	—	10	—	225	9,808	170
1809	14	—	—	—	—	3	—	1,753	21,418	5,385
1810	83	—	—	—	—	15	—	2,221	2,976	16,772
1811	9	—	—	—	—	11	—	102	12,951	9,946
1812	3	—	—	—	—	10	—	—	10,735	25,970
1813	—	—	—	—	—	—	—	—	—	—
1814	70	40	—	—	—	9	—	9,807	33,622	13,953
1815	151	92	—	—	—	11	—	8,964	24,649	6,351
1816	47	—	—	—	—	10	—	8,047	14.795	2,876
1817	—	—	—	—	—	20	—	13,761	31,418	4,699
1818	255	170	—	—	—	22	—	24,092	43,803	6,582
1819	170	150	—	—	—	27	—	12,827	27,664	9,046
1820	213	180	—	—	—	29	—	14,609	17,681	475
1821	421	281	—	—	—	58	—	24,615	34,845	592
1822	347	207	—	—	—	77	—	31,786	29,972	626
1823	1,001	908	—	—	—	32	—	35,892	21,595	5,668
1824	972	519	—	—	—	43	—	44,035	25,104	2,459
1825	914	380	—	—	—	33	—	82,284	41,032	4,769
1826	2,905	1,525	—	—	—	175	—	30,219	8,097	2,665
1827	696	567	—	—	—	54	—	60,630	19,495	2,258
1828	3,087	3,209	—	—	—	51	—	62,901	19,043	1,644
1829	3,746	3,608	—	—	—	50	—	40,314	18,777	266
1830	3,998	4,005	—	—	—	—	—	74,496	8,218	2,319
1831	5,792	5,804	—	—	—	263	—	60,782	22,675	
1832	6,313	4,170	—	—	—	360	—	55,185	13,684	
1833	8,908	6,040	—	—	—	511	—	72,776	20,714	
1834	10,327	5,952	—	—	—	647	—	62,553	19,339	
1835	12,737	7,025	—	—	—	824	1,397	69,632	8,582	2,772
1836	14,055	8,728	—	—	—	1,716	3,493	90,450	20,451	
1837	19,564	10,754	—	—	—	1,812	5,663	53,359	11,011	2,151
1838	21,950	10,250	—	—	—	1,996	6,117	79,320	8,577	2,694
1839	22,944	14,638		1,524		3,247	5,674	68,682	11,730	4,753
1840	25,820	11,721		3,484		3,477	7,611	63,278	5,273	1,569
1841	30,280	13,937		8,798		4,191	10,563	62,483	5,287	2,716
1842	26,668	13,922		12,307		6,521	11,876	47,510	3,118	1,887
1843	37,255	14,948		14,957		7,734	6,594	53,495	2,715	1,680
1844	38,077	15,126		17,705		8,659	6,741	70,305	5,682	6,341
1845	37,825	16,839		22,815		13,765	10,065	61,777	5,188	3,267
1846	39,112	13,656	20,956	5,994	1,686	11,626	11,279	52,922	4,809	3,274
1847	41,927	16,503	27,876	7,133	853	13,566	8,123	41,396	1,956	3,005
1848	46,612	16,095	37,351	9,827	1,056	13,409	16,923	48,478	403	2,922
1849	50,584	17,926	45,348	10,400	1,474	20,345	11,041	45,839	516	4,420
1850	—	—	—	—	—	—	—	—	—	—
1851	—	—	—	—	—	—	—	—	—	—
Average weight.	About 280 lbs.						3 Cwt.		1 to 2 Cwt.	

Note.—There are no returns for the year 1813, owing to the London Custom House records being destroyed by fire—From 1833 to 1838, inclusive, separate Returns were not kept of Wool importations from the ports of Port Phillip, South Australia, Western Australia, and New Zealand; and from 1839 to 1845, inclusive, many of the Wools belonging to these colonies were shipped *via* Van Diemen's Land.

Importation of Wool in Bales into the United Kingdom during the following years.

Years.	Russian.	Italian.	Turkey, Syria, Egypt, &c.	Peruvian, Sheeps', and Alpaca	Buenos Ayres and Cordova.	United States.	Danish.	Sundries.	Goats'.	Total Bales.
1796	21	7	8	17	—	—	7	32	—	17,244
1797	10	41	42	—	—	—	5	380	—	25,281
1798	—	—	—	—	—	—	—	130	—	11,512
1799	—	30	28	1	—	—	—	320	—	23,839
1800	25	84	76	—	—	—	14	473	—	42,440
1801	—	198	187	73	—	—	—	221	—	34,668
1802	1	186	174	210	—	—	—	1,326	—	34,601
1803	241	940	880	126	—	—	112	700	—	26,833
1804	482	627	605	24	—	—	205	230	—	37,598
1805	728	126	101	132	—	—	257	121	—	38,146
1806	207	60	58	110	—	—	57	64	—	31,967
1807	1,048	54	52	307	—	—	305	334	—	55,832
1808	27	130	124	407	—	—	6	22	—	11,056
1809	267	515	508	1,069	—	—	85	811	—	31,828
1810	868	683	676	601	—	—	207	142	—	25,244
1811	29	351	345	447	—	—	4	11	—	24,206
1812	259	6	4	261	—	—	92	12	—	37,352
1813	—	—	—	—	—	—	—	—	—	—
1814	1,031	426	421	112	—	—	307	3,801	—	63,599
1815	876	296	292	274	—	—	250	3,950	—	46,156
1816	699	262	257	1,308	—	—	220	1,476	—	29,997
1817	582	179	178	956	—	—	125	5,636	—	57,554
1818	1,666	1,015	1,051	2,358	—	—	510	10,850	—	92,374
1819	1,580	1,494	1,507	174	—	—	484	3,800	—	58,923
1820	150	334	380	25	—	—	20	1,459	—	35,555
1821	185	8	17	52	—	—	42	1,836	—	62,952
1822	554	5	10	32	—	—	170	4,356	—	68,142
1823	400	2	4	11	—	—	208	2,142	—	67,363
1824	631	377	395	852	—	—	220	2,236	—	77,843
1825	5,362	1,430	1,452	1,054	—	—	897	5,055	—	141,662
1826	1,650	534	547	5,068	—	—	320	1,189	—	54,894
1827	2,607	846	872	556	—	—	372	2,543	—	91,496
1828	2,706	425	434	929	—	—	715	1,214	—	96,358
1829	1,664	8	17	70	—	—	321	818	—	69,659
1830	1,680	14	29	64	—	—	323	3,672	—	98,818
1831	348	—	—	318	—	—	—	1,389	—	97,371
1832	997	—	—	2,445	—	—	—	639	—	83,793
1833	4,114	1,112	—	1,913	—	—	1,241	3,351	—	120,680
1834	6,910	4,761	14,983	8,498	—	—	1,547	760	—	136,277
1835	9,134	2,816	6,660	10,064	—	—	1,175	2,295	—	145,113
1836	15,072	3,754	14,714	16,653	—	—	4,488	14,762	—	208,336
1837	15,116	3,314	8,421	30,030	—	—	1,059	591	—	162,847
1838	8,826	4,434	4,249	30,378	—	—	1,388	1,593	—	181,772
1839	17,847	5,197	8,039	37,854	—	—	1,232	2,108	—	205,469
1840	11,776	4,055	5,492	40,000	—	—	2,199	320	—	186,079
1841	10,825	3,949	2,095	55,190	—	—	2,714	354	5,621	219,003
1842	14,199	573	1,439	19,956	—	—	1,475	358	5,967	167,776
1843	10,181	546	1,854	36,129	—	—	33	383	3,667	192,771
1844	16,984	5,310	9,564	24,565	—	—	424	3,684	5,165	234,332
1845	21,008	7,145	8,249	41,878	6,135	4,699	1,637	2,843	6,142	271,277
1846	11,451	4,247	12,520	56,574	1,076	2,440	1,408	1,550	5,231	261,811
1847	7,055	3,194	7,983	56,652	4,578	1,544	942	1,510	7,023	252,819
1848	7,402	1,502	6,272	56,438	6,463	139	678	1,067	5,468	278,505
1849	16,681	1,998	5,278	43,143	5,785	975	1,366	2,071	13,258	298,444
1850	—	—	—	—	—	—	—	—	—	—
1851	—	—	—	—	—	—	—	—	—	—
Average weight.	3 Cwt.	Various.		84 lbs.	4½ to 8 Cwt.	Various.			1½ to 2 Cwt.	—

Note.—Until the year 1845, the Wool imported into Great Britain from Buenos Ayres, Cordova, &c., was entered in the Custom House returns as South American, with the return of Peruvian; and the Goats' wool imported to the year 1840, inclusive, was entered as from Turkey, Syria, Egypt, &c. The Peruvian sheep and Alpaca wool is in ballots of 84 lbs. each.

It will be seen that the total number of bales imported in each year, from every country, from 1796 to 1849 inclusive, is given in the last column of this page.

Had we been dependent on foreign countries for the raw material of this staple branch of British industry, our foreign and domestic trade would have been crippled, not only by insufficient supplies, but by high prices. Estimating the imports for the year 1850 at about 300,000 bales, (or 70,000,000 lbs.), nearly two-thirds of this quantity will be supplied from our transmarine territories in Australia, at the Cape of Good Hope, and in British India. I confidently look forward to a large progressive increase of this valuable branch of trade; for if we calculate the population of the United Kingdom at thirty million, it is not an unreasonable allowance to allot six lbs. weight of woollen garments annually to each individual, if they could be cheaply obtained. This would require a supply of 180,000,000 lbs. of wool yearly, for domestic use alone. Mr. M'Culloch estimates the entire produce of British and Irish wool at 500,000 packs, of 240 lbs. each = 120,000,000 lbs.: the home and colonial wools would therefore be only equal to the wants for domestic consumption, and leave nothing for the export of woollen manufactures to our colonies and to foreign countries, a trade which is now carried on to the extent of nearly £7,000,000 sterling annually, and is still capable of great increase, as light woollen fabrics are as conducive to health in warm climates, as stout fleecy garments in cold regions.

I adverted, in the history of New South Wales, to the great national importance of the wool trade; but there are some other facts connected with this ancient branch of traffic and manufacture, which deserve a record in this work, in connection with the valuable staple product of our Austral-Asian settlements. For this collection of data, I am indebted to Mr. Henry Burgess, one of the best-informed practical men in England. The rise and progress of the growth and manufacture of wool is associated with the advancement of society in Europe, and even in some parts of Asia, but especially in this kingdom; and the welfare of the Australian settlements has been so materially forwarded by it, that the following summary of its history, though almost too lengthy for these pages, may not be considered wholly inappropriate:—

"It is recorded of Phemius, the step-father of Homer, that he taught letters and music to the youth of Smyrna, and received wool in exchange for his instruction. The plain of Damascus supplied large quantities of wool for the manufactures of Tyre in the palmy days of Phœnician enterprise, and when purple and fine linen ranked among the choicest articles of commerce. Colchis in Thrace, Laodicea in Phrygia, also produced wools of superior quality, and a portion of the latter was naturally of a fine jet black. Ireland, at one time, had numerous flocks of a similar breed. But Miletus, the Lord Western of his time, is stated to have produced in Caria, wool preferred to all others. Pliny speaks of wool being brought from a great city north of the Ganges, probably in Thibet, or Nepaul, by way of Bactria, also to supply the manufactures of Western Asia; it was from these sources of supply, the material was obtained for the manufacture of those costly fabrics, which, when dyed with Tyrian purple, conferred such celebrity on the commerce of Phœnicia. After the decline of the Tyrian manufacture, it appears to have planted itself in Italy; Padua and Modena having, in their turn, become celebrated for their woollen fabrics.

"Spain, antecedent to, or about the commencement of, the Christian era, had also attained celebrity for its woollen manufactures, and at that time exported largely. Soon after Cæsar's time Britain produced wool in great abundance, and in Anno Domini 314, great fairs for wool were held several times in the year at York, London, and Colchester. It was about the middle of the tenth century when the woollen manufacture established itself on an extensive scale in Flanders, and from that time to the commencement of the twelfth century, the bulk of the wool produced in Britain appears to have been exported to the former country, and to such an extent, that it became proverbial that all the nations in the world were clothed with English wool made into cloth by the Flemings. An extensive inundation of the Low Countries about the end of the eleventh century, having caused a number of Flemings to seek refuge in England, there they met with a favourable reception, and gave the first characteristic impetus to the woollen manufacture therein; so that by 1189 it had become extended over the greater part of England. At this date guilds of weavers had been established in London, Huntingdon, Lincoln, Nottingham, Winchester, Oxford, and York, all paying fines to the king for their corporate privileges, and licences were also granted to dealers in several large towns. In the thirty-first of Henry II. (1185) the weavers of London obtained a confirmation of their charter, in which it was directed, that if any weaver mixed Spanish wool with English, in making cloth, the chief magistrate should burn it. In 1216 it is stated that the breed of sheep had greatly increased, and that, although the exportation of wool was still very considerable, the manufacture of cloth had also progressively increased, and that large quantities of cloth in the grey unfinished or undressed state, were also exported; and in which state a good deal of cloth was also worn in England; it appearing that up to this time very little progress had been made in the art of dyeing, although we find the duties on woad amounting to £593 12s. 1d. in a single year. In 1261 the barons enacted "that the wool of England should be manufactured at home, instead of being sold to foreigners, and that all persons should wear woollen cloth made within the kingdom, and avoid every superfluous extravagance of dress." How far this restrictive and sumptuary enactment was carried into effect, does not distinctly appear, but we find that in 1266, new regulations were enacted in respect to levying of duties on wool exported. In

1298 the king, by letter, directed that all wool and wool-fells of the counties of Bedford, Buckingham, Derby, Cambridge, Huntingdon, Warwick, Leicester, Rutland, and Norfolk, should be shipped at Lynn; Newcastle, Hull, Ipswich, Southampton, Bristol, and London, being also other ports for the exportation of the same. It was in 1327 the king granted a patent in favour of the manufacturers of worsted stuffs in Norfolk; and in 1331, great inducements were held out to Flemish manufacturers to immigrate into England. In 1337 an act was passed, making it felony to carry any wool out of the kingdom, and at the same time, all persons, except the king and his family, were interdicted from wearing any cloth of foreign manufacture, on pain of arbitrary punishment; this enactment, however, appears to have been preparatory to the king (Edward III.) constituting himself the Mehemet Ali of that day, for we find him, immediately after, contracting for 20,000 sacks of wool, and for some years subsequent, the great wool-stapler of England, entering into and concluding negotiations with Flanders and other foreign parts, for the supply of wool, and for the year 1354, we find the following very circumstantial account of the exports and imports, viz.:—

Exports.

Quantity.	Value.	Customs.
31,651½ sacks of wool, at £6 .	£180,909	£81,624
3,036 cwt. (120 lbs.) of do. £2	6,072	
65 wool-fells, 21*s.* 8*d.* . .	1	
hides.	89	7
4,774⅕ pieces of cloth . . .	9,549	216
8,061½ „ of worsted stuffs	6,718	
Total Exports . . .	£212,338	£81,847

Imports.

Quantity.	Value.	Customs.
1,831 pieces of fine cloth . .	£10,986	£98
397¾ cwt. of wax	795	20
1,829½ tuns of wine	3,659	183
Linens, mercery, grocery . . .	22,944	286
Total Imports . . .	£38,384	£587

"By 1357 the king appears to have become tired of trading, for in this year, English as well as foreign merchants, were permitted to export wool and wool-fells, to any country in amity with the king. About this time the woollen manufactures of Ireland had acquired great celebrity. The Catalonians, at this period, appear to have enjoyed the highest repute in Europe for their fine woollen fabrics, but were, at the same time, buyers of the stuffs called *serges*, manufactured by the Irish, for re-sale in Florence, where it is stated the luxury of dress was carried to the greatest height. A passion for what is termed luxury in dress, appears at this period to have become general over a great part of Europe; for we find that, in 1363, a sumptuary law was passed by the parliament of England, prescribing the kinds of cloth to be worn by the different classes of society. From 1363 to the close of the century, various regulations were enacted respecting the fulling, and the sale and exportation of both wool and cloths; and, although in the year 1391, the exportation of wool is stated to have been much less than usual, the customs on it amounted to £160,000, over and above tonnage, poundage, aulnage, pellage, &c. In the same year, Guildford, in Surrey, is spoken of as the centre of an extensive manufacture, where the cloths had fallen into disrepute, consequent on the defective fulling and undue stretching. In 1399, cloths of certain descriptions, and below a certain value, should be exempt for three years from the charges of sealing and duty, for the ease of the poor.

"In 1421 the following statement was presented to the king, as the proceeds of revenue for the year ending Michaelmas, 1420, viz.—

Customs on wool	£3,967	1	2
Subsidy on ditto	26,035	18	8
Small customs	2,436	9	1½
12 pennies in the £ on value of goods exported, £164,750 15*s.* 10*d.* .	8,237	10	9¾
	£40,676	19	9¼
Casual revenue	15,066	11	1
Total revenue	£55,743	10	10¼

"In 1429 it was ordained that, for the profit and wealth of England, the prices of wool and wool-fells should be raised, and that they should be sold to the merchants of Genoa, Venice, Tuscany, Lombardy, Florence, and Catalonia, for gold and silver only. In 1449, English cloths were prohibited in Brabant, Holland, and Zealand, which being judged contrary to the existing treaty, and found very distressing to the men weavers, fullers, and dyers, and the women websters, carders, and spinners, and all others concerned in the trade, it was resolved in parliament, that if the Duke of Burgundy did not repeal the injurious ordinance, no merchandise of the growth or manufacture of his dominions should be admitted in England. In 1463, the parliament, considering that the wool of England was the principal commodity of the kingdom, and desirous of promoting the industry of the people and the prosperity of the towns, prohibited foreigners from buying or shipping any wool, wool-fells, morlings, or shorlings, from England or Wales, except from the four northern counties, and the districts of Alverton and Richmond, in Yorkshire, and thence they were allowed to be shipped from the port of Newcastle only. In 1497, it is stated that woollen cloth was one of the greatest commodities of England, and that Henry VII. concluded a commercial treaty with the Archduke Philip, wherein it was stipulated that the woollen goods of England should be received in the Netherlands without paying duty; yet such appears at all times to have been the caprice and uncertainty resulting from the manufacturing mania, that, in 1530, we find foreign merchants, as well as English manufacturers, withdrawing from England, insomuch that the woollen manufactures very much declined, and foreign cloth was sold cheaper than the English, by which means much land was turned into sheep-walks for supplying the Netherlands with wool.

"In 1534, an act of parliament (25 Hen. VIII., c. 13) represents the practice of engrossing farms and diverting land from tillage to the support of vast numbers of sheep, as an evil lately sprung up, and that some have 24,000, some 20,000, some 10,000, to 5,000 sheep, whereby a good sheep, that used to be sold for 2*s.* 4*d.* to 3*s.* at most, is now

sold for 6*s.*, or 5*s.*, or 4*s.*, at least; and a stone of wool, which used to be sold for 1*s.* 6*d.* or 1*s.* 8*d.*, is now sold for 4*s.* or 3*s.* 4*d.*, at least, &c., which things tend to the decay of hospitality, the diminishing of the people, and to the let of cloth-making, whereby many poor people have been accustomed to be set on work; for remedy it was, in substance, enacted, that none shall keep above 2,400 sheep (exclusive of lambs), and no man should hold above two farms.

"In 1537, or thereabout, it is stated that the woollen manufacture was introduced at Halifax, in Yorkshire, and that, besides the largeness of its parish, which contained eleven chapels and about 12,000 people, nothing is so admirable as the industry of the inhabitants, who, notwithstanding an unprofitably barren soil, have so flourished by the cloth trade, that they are become very rich, and have gained a reputation for this above their neighbours.

"In 1550, sixty vessels cleared from Southampton with wool for the Netherlands, so great (it is observed) was the demand for the woollen manufactures of that country, even when England had made a considerable progress in the same manufacture.

"In 1552, the English company of merchant-adventurers, who had had for the forty-five preceding years the sole command of the British commerce, had reduced the price of English wool to 1*s.* 6*d.* per stone; in the preceding year they had exported 44,000 woollen cloths of all sorts, while all the English merchants together had, in the same year, exported only 1,100 cloths.

"In 1560, the commerce between England and the Netherlands is represented to have attained a great height, the export of draperies from England amounting to 200,000 pieces, and the aggregate export to £2,400,000, to the great benefit, it is said, of both countries, neither of which could possibly (without the greatest damage) dispense with, of which the merchants on both sides were so sensible that they fell into a way of insuring their merchandise from losses at sea by a joint contribution. *This then appears the period of commencing the practice of maritime insurance.*

"In 1567 the city of Norwich is spoken of as having recovered from the desolating effects of Ket's rebellion in 1540, and that its manufacture of fine and light stuffs had become famous all over Europe, and that the Flemings, about this time, introduced into that part of the country a taste for floriculture; this is also the period when Colchester, in Essex, was the centre of extensive manufactures of baizes, serges, and other light worsted fabrics.

"In 1582, the Hanseatic League (the German League of the present day) complained to the Diet of the empire that by the high duty laid on woollen cloth in England it had become twice or thrice as dear as it had before been, whereby the vast increase of England's wealth, 200,000 cloths being yearly imported from thence. The only remedy was to banish the English merchant-adventurers out of the empire, and absolutely to prohibit all manner of English woollen manufactures. The complaints of the League prevailed with the Diet, who passed sentence against the English merchants, and absolutely prohibited all English woollen goods. Notwithstanding the prohibition by the German Diet, it appears that in 1603 a duty of £1 13*s.* 4*d.* was levied on every sack of wool exported by aliens, and the same for every 240 wool-fells, and by proclamation the exportation was afterwards prohibited, which indeed, it is said, it was high time to do, the English manufacture of it being now too considerable, and so much sent into foreign parts as to employ or work up all, or nearly all, our own wool at home.

"In 1608 it is stated that the English were but little skilled in the arts of dying and dressing their own woollen cloths, and therefore usually sent them white into Holland, where they were dyed and dressed, and then sent back to England for sale. It is surprising that those who made the finest cloths in the world could not finish them, but the fact was really so. Alderman Cockayne, and some other merchants, reflecting on the great profit thereby made by the Hollanders, proposed to the king to undertake the dying and dressing of cloths at home, to the great profit of the public and his Majesty; whereupon the alderman obtained an exclusive patent for it, and the king was to have the monopoly of the sale of such dyed cloths. The king thereupon issued a proclamation prohibiting any white cloths to be sent beyond sea, and seized the charter of the Company of Merchant Adventurers, which empowered them to export white cloths. In retaliation the Hollanders and Germans prohibited the importation of all English-dyed cloths; from this period the manufacture appears to have struggled with alternations of success and the reverse for a great length of time.

"In 1630, King Charles is stated to have confirmed his father's proclamation against the exportation of wool, wool fells, and woollen yarn, upon pain of confiscation, &c., for the encouragement of the woollen manufactures, and ordering that for the better utterance of cloth within the kingdom all black cloths and mourning stuffs at funerals should be only of the wools of the kingdom, and the false dying of cloths and stuffs being a great hindrance to their vent, none should therein use any logwood or blockwood. The prohibition of the exportation of wool was further confirmed by parliament in 1647; and in 1660 it was further enacted that no live sheep, wool, or woollen yarn should be exported on pain of forfeiture thereof, and of the ships or vessels attempting to carry the same, and also a penalty of 20*s.* for every sheep, and 3*s.* for every lb. of wool, and three months' imprisonment for the master of such sheep, 12 Car. II., c. 22. In 1662 several additional enactments were passed more rigidly prohibiting the exportation of wool. In 1666, 18 Car. II., c. 4, it was enacted, for the encouragement of the woollen manufactures of England, 'that no person should be buried in any shirt, shift, or sheet, made of, or mingled with, flax, hemp, silk, hair, gold, or silver, or other than what shall be made of wool only, upon forfeiture of £5 to the poor of the parish, towards a stock or work-house for their employment. In the following year, 1667, great improvements in dyeing and finishing of the cloth took place in consequence of the immigration of some workmen from Flanders. In 1685 an influx of refugees from France brought with them considerable improvements in the manufacture of fine worsted stuffs. In 1688–9 great complaints prevailed against the rivalry of the woollen manufactures of Ireland; at the close of the century the total exportation of woollens from England was as follows, of which two-thirds were exported from the port of London, viz :—

1698	£3,120,615
1699	2,932,292
1700	2,989,163
1701	3,128,365

and at the three following periods the value of all

woollen manufactures and worsted stuffs exported was, viz.:—

Period.	Value in £	Period.	Value in £.	Period.	Value in £
1718	2,673,696	1738	4,168,643	1772	4,436,783
1719	2,730,297	1739	3,218,273	1773	3,875,929
1720	3,059,049	1740	3,056,720	1774	4,333,583
1721	2,903,310	1741	3,669,734	1775	4,220,173
1722	3,384,842	1742	3,358,787	1776	3,868,053
1723	2,920,601	1743	3,541,558		

and for the ten years, 1790—1799, the amount annually exported averaged £5,392,744. In an appendix to the evidence taken by a committee of the house of lords in 1828, is a statement showing the proportion of short and long wool grown in each county of England, which represents the quantity in 1800 to have been 325,000 packs, and in 1828, 384,500 packs of 240 lbs. each = 92,260,000 lbs.: this is for England only, and to which Wales and Scotland are to be added.

The machinery of England and Scotland is capable of working up an almost indefinite quantity of wool; its manufacture is, I believe, one of the most steadily profitable branches of our national industry.

The production of the raw material, also, is found remunerative in England, Spain, Saxony, and other countries. Capital invested in an Australian sheep run is considered to return at present about twenty per cent. The most highly-prized to breed from are Lord Western's, the Saxony, and pure Merinos. Saxony rams, recently imported at Melbourne, sold privately for thirty guineas each. October and November are the shearing months; and soon after that time ships begin to load for England. The wool from Victoria is annually improving.

The average weight of a Port Phillip sheep is 60 lbs.; each sheep is computed to yield a clip of 2½ lbs. of wool (or 3 lbs. on rich pasturage), and the average weight of tallow obtained from each animal by boiling down, is 26 lbs. The price in February, 1849, at Melbourne, was 4*s.* to 5*s.* per sheep. Rough serviceable horses sold at the same period at prices varying from £4 to £14 sterling each; horned cattle at 25*s.* to 30*s.* per head.

The large Leicestershire breed of sheep in Australia weigh about 140 lbs. each, and yield 6 to 7 lbs. of wool. The Saxon breed yield a much finer wool, and have a small carcase. Dr. Thompson had, however, a pet Saxon wether, which weighed 150 lbs, and whose fleece weighed 10½ lbs. In general the yield of the fleece at Port Phillip is 4 lbs. from a sheep at maturity (five years), but every subsequent year the weight of the fleece decreases. Much depends on the state of the pasture; if the soil be too rich, or too sandy, the teeth of the sheep wear away quickly, and if not consigned to the butcher they would perish of inanition. The coarse, hardy Leicester sheep is not so liable to the catarrh, or foot rot, as the more pure-blooded Saxon or Merino.

Live Stock were first imported into the province, as previously stated, in 1836. Their numbers have rapidly increased since that period, as will be seen from the following statistical return:—

Year	Horses.	Horned Cattle.	Sheep.	Swine.
1840	2,372	50,837	782,283	
1841				
1842				
1843	4,605	100,792	140,433	3,041
1844	6,278	167,156	1,602,798	—
1845	7,076	187,873	1,860,912	—
1846	9,289	231,602	2,449,527	3,986
1847	11,400	290,439	2,996,992	5,867
1848	—	—	—	—
1849	16,495	386,688	5,130,277	5,659
1850	—	—	—	—

Note.—There are no returns previous to the year 1840.

The "boiling down" system has been adopted in this province from necessity, as well as in New South Wales, though to a much less extent. The live stock slaughtered, and its produce, is thus shown:—

Year.	Boiling down Establishments.	Slaughtered.		Tallow produced.	Hogs slaughtered.	Lard produced.
		Sheep.	Horned Cattle.			
				Cwt.		lbs.
1845	4	10,950	2,784	4,344	29	240
1846	3	7,007	982	1,994	—	—
1847	4	52,437	2,647	13,205	6	488
1848	7	120,691	5,545	27,725	2	200
1849	—		—	—	—	—
1850	—		—	—	—	—
Total						

In 1848, the live stock slaughtered in Melbourne, consisted of, sheep 37,787; horned cattle 6,667; pigs 1,475.

The average weight of tallow obtained from a sheep, is 26 lbs.

The expense of converting sheep into tallow, sorting and packing the skin, wool, &c., is about *one* shilling a sheep, which may be defrayed by boiling the pelt, hoofs, horns sinews, &c., into glue, of which each sheep will yield about four pounds weight. With regard to cattle, the *intrinsic* value of an ordinary four-year-old beast consists of 80 lbs. of tallow, at 32*s.* per cwt.; hide, horns, glue, bones, refuse, soup, and meat, 14*s.* 6*d.* = 40*s.*

There is a very extensive "boiling down" establishment, near Melbourne, belonging to Messrs. Watson and Wright, who have not only large steam boilers for obtaining the tallow from several animals at once, but also kilns for drying hams, manufactories for curing meat, a tannery, coopery, &c., all giving employment to a number of people. There are also similar establishments belonging to Messrs. Brodie and Cruikshank, and other enterprising individuals, who have established candle works and soap manufactories.

The Australian preserved beef, put up in air-tight canisters, is excellent, and well deserving the attention of the victualling department of her Majesty's navy, and of the owners of merchant ships.

I have recently partaken of a round of this meat, put up two years before in New South Wales, which was fit for any table in the kingdom; the flavour was good, and the nutritious qualities very great. The beef is of easy digestion, and would be well adapted for aged and young persons in England.

Mr. R. C. Dangar, of Billiter Street, London, has sent out to the colony a preserving apparatus, and properly instructed persons to prepare the meat. He has now obviated the defects that hitherto existed in the Australian meats, which rendered some of them unsaleable in England, and has introduced a valuable article of commerce. The quality of that now imported is at least equal, by some persons it is even deemed superior, to any of the meats preserved in England.

The admiralty require annually five hundred tons of preserved boiled beef for the crews of her Majesty's ships. A large part of this is, I believe, supplied from Wallachia and Moldavia; but it is to be hoped that encouragement will be given by government to the production of our own colonies. The use of this fresh meat in the British mercantile marine, once or twice a week, would be beneficial to the seaman and economical to the ship-owner; good salt beef for sailors now costs from 3*d.* to 4*d.* per lb., and each man is allowed one pound and a-half a day. Of this about fifty per cent. is lost in boiling and by weight of bone. One pound of Australian cooked fresh meat, *without* bone, would not cost more than the pound and-a-half of salt meat, and be far more nutritious and healthy for the men.

Several ship-masters have commenced the royal navy practice, and are using the fresh meat; and the certificates of the commanders of these vessels prove its capability of standing the test of any voyage, even when subjected to the trying temperature of the hold of a ship in the tropics. I used, while in China, some Australian beef gelatine, for the preparation of soup, and found it wholesome and palatable. In a few years, it is probable that the export of cured meats will be a large and profitable branch of business; and, as horned cattle are increasing with extraordinary rapidity, the supply may be said to be almost incalculable.

The cultivation of the grape has been successfully commenced in various parts of the colony, and promises well.

Year.	Acres of Vineyards.	Wine Made.	Brandy Made.
		Gallons.	Gallons.
1847	78	2,600	—
1848	101	1,300	30
1849	108	6,306	100
1850	—	—	—

The produce of the Swiss vineyards at Geelong is 1,000 gallons of wine per acre. Mr. Andrew Lang, justice of the peace of Dunmore, Hunter's River, had 1,200 gallons per acre. In both instances the beverage had the character of the Rhenish and Moselle wines. The tract of volcanic country to the northward of Melbourne is peculiarly adapted, by soil and climate, for the cultivation of the vine; and a large German immigration is expected, for the development of this useful product.

The common flax plant *(linum usitatissimum)* is indigenous to Australia. Towards the Glenelg river it covers a large tract of marshy land. On the Lower Darling river it is found in great abundance, and is used by the natives for cord or line-nets. The south-west part of Victoria province, and the north-east districts of New South Wales, would seem well adapted for the culture of flax, which is a thirsty plant, deriving nutriment from the air, rather than from the soil. It affords a very profitable crop, which, if properly dressed, always commands a market in Europe. The raw staples of flax, hemp, cotton, and silk, will doubtless be included, in course of time, among the valuable exports of Australia.

The *red gum*, or mahogany of the colonists, is now being exported to England: the texture is close and fine. Recently, a

vessel of 300 tons burden—the *Jane Cain*, was launched from the Melbourne wharf: she was elaborately finished; and her cabin exhibited specimens of nearly every kind of wood produced in the colony. The Cape Otway, and other neighbourhoods, present a great abundance of rare and useful timbers.

The fisheries of Port Phillip, as also those of the other Australian colonies, are as yet undeveloped. A fine fish, called "cod," occasionally weighing upwards of ninety pounds, is numerous, and easily angled, in the rivers in the northern portion of the province. These fish are stated to be equal in flavour, though not in firmness, to their namesakes of Newfoundland. In February and March, large "schools" of herring frequent the coast. The real "Blackwall whitebait" may be taken in quantities in the bay of Port Phillip; also the schnapper, or bream, butter-fish, flatheads, lobster, or sea crayfish, and large shrimps.

Whales frequent the bays and harbours on the coast; Portland bay has been a favourite resort for the cetacæ during the calving season, and there is a lucrative fishery.*

The progress of the province is seen in the following tabular statement:—

Years.	Imports.	Exports.	Total.	Custom duties.	Vessels outwards.	Wool exported.
					Tons.	lbs.
1837	£108,939	£12,180	£121,119	£2,979	13,424	175,081
1838	71,061	20,589	91,650	6,735	11,679	320,393
1839	204,722	77,684	282,406	11,476	20,352	615,605
1840	392,026	154,650	546,676	27,306	34,477	1,704,861
1841	217,764	157,069	374,833	46,093	34,156	2,752,340
1842	194,510	197,912	392,422	54,973	34,146	3,331,395
1843	120,675	221,639	341,314	41,419	34,215	4,204,979
1844	158,863	242,801	401,664	36,451	—	4,828,735
1845	205,390	342,624	548,014	42,536	—	5,415,000
1846	315,571	425,201	940,772	37,852	—	6,406,950
1847	437,696	688,511	1,106,407	38,288	48,643	10,210,038
1848	373,676	675,359	1,049,035	52,270	55,094	10,524,663
1849	—	—	—	—	—	12,697,440
1850	—	—	—	—	—	—

Note.—From 1841 to 1845 the returns are for the years ending 10th October, which represent the annual progress of the colony better than the year ending 31st December, as that is the middle of the wool shipping season. The extensive transactions with Sydney are not recorded, the province having been a district of New South Wales.

* Some whale fishers at Peterhead, in Scotland, have disputed the accuracy of my statements under Newfoundland, as to the proportion of oil which each foot of whalebone generally represents. If the sample blade of whalebone, *i. e.* the largest of the laminæ in the series, weigh seven pounds, the whalebone will weigh about a ton. The oil yielded generally, according to the measurement of the different lengths of whalebone is stated by Scoresby to be as follows:—Whalebone, 1 foot = 1½ tuns of oil; 2 = 2½; 3 = 2¾; 4 = 3½; 5 = 4; 6 = 5; 7 = 6½; 8 = 8; 9 = 11; 10 = 13½; 11 = 17; 12 = 21.

The progress of the export trade is thus shewn:—

Year.	United Kingdom.	British Possessions	Total Value.	Total Tonnage Outwards.
1837	—	£12,180	£12,180	13,424
1838	—	20,589	20,589	11,679
1839	£26,654	51,030	77,684	20,352
1840	60,155	93,808	153,963	34,477
1841	94,431	81,704	176,135	34,156
1842	200,332	36,790	237,122	34,146
1843	266,650	41,316	307,966	34,215
1844	202,850	51,157	256,847	—
1845	576,551	86,946	463,957	—
1846	323,881	101,320	425,201	—
1847	566,417	101,494	688,511	48,643
1848	581,355	93,739	675,359	55,094

The following is the number and tonnage of vessels, inwards and outwards, engaged in the Geelong trade in the year ending October 10, 1849:—

Vessels.	Inwards.		Outwards.	
	No.	Tons.	No.	Tons.
Foreign . . .	174	12,659	76	11,347
Coasters . . .	149	7,534	141	7,848
Total . .	223	20,193	217	19,195

Imports, £36,195; exports, £255,087; exclusive of goods removed coastwise; revenue collected, £9,256. Produce exported—wool, 5,684,903 bales; sheep, 9,976; horned cattle, 524; beef, 112 tons; hides, 637; horses, 2,400; tallow, 373 tons.

Among the imports, in 1848, were the following items:—Apparel, 1,607 kegs; gunpowder, 18,220 lbs.; shot, 22 kegs; beer and ale, 289,381 gallons; bricks (Bath and fire), 9,000; cocoa nuts, 2,000; coffee and chocolate, 505 cwt.; cottons, 527 bales; earthenware and china, 864 packages; glass, 1,017 packages; haberdashery, 1,329 packages; hardware and ironmongery, 6,420 packages; hats, caps, and bonnets, 168 packages; hosiery and gloves, 541 packages; instruments (musical), 28 packages; iron and steel, 872 tons; jewellery, 6 cases; lead, 29 tons; leather (unmanufactured), 72 packages; boots and shoes, 305 packages; machinery, 505 packages; nails, 898 kegs; malt, 465 bushels; oil (linseed), 626 gallons; oilcloth, 11 cases; oilman's stores, 3,615 packages; pepper and spices, 36,648 lbs.; perfumery, 4 cases; pipes (tobacco), 151 boxes; pitch, tar, and rosin, 654 barrels; plants and seeds, 241 packages; plate and plated ware, 4 packages; saddlery and harness, 244 packages; silks, 31 cases; slates, 19,174 number; soap, 232 boxes;

brandy, 50,345 gallons; rum, 52,552 gallons; gin, 15,769 gallons; whisky, 5,529 gallons; liqueurs, 53 gallons; stationery and books, 551 packages; sugar (refined), 992 cwt.; ditto (raw), 1,940 tons; tea, 302,840 lbs.; tin and tin-ware, 177 boxes; tobacco, cigars, and snuff, 179,506 lbs.; toys and turnery, 85 packages; turpentine and varnish, 70 cans; vinegar, 6,178 gallons; watches and clocks, 75 packages; wine, 60,476 gallons; wooden ware, 1,008 packages; woollens, 265 bales; &c.

Excepting tea, sugar, spices, and a few other articles, the whole of the above-mentioned goods, and others not enumerated, were from England, and amounted in real value to about £300,000. The exports for the present year to the Port Phillip district will amount, it is estimated, to half a million sterling; and to the Sydney district, about a million and-a-half sterling. Thus we export to a colony which is but the creation of yesterday, with a population of 250,000 inhabitants, an amount of goods nearly equal to one-half the total annual value of all our exports to France, with its thirty-six or forty million of inhabitants. At the close of this work, I hope to prepare a clear statement of the British trade with our maritime possessions, compared with that carried on with foreign countries, in order that a just estimate may be formed of the relative importance of our colonial and foreign trades; and lest the assertion made in Parliament, during the discussion on the Australian government bill, that the cost of our colonies to the home exchequer was equal to the trade we carried on with them, should be believed, it may here be stated that New South Wales and Port Phillip, as well as other colonies, *defray every shilling of their own expenditure;* and the troops stationed there might as well be withdrawn, for any protection they affords to the colonists. Excepting, therefore, the pay of these soldiers, New South Wales and Port Phillip not only meet their own charges, but remit yearly a considerable sum to her Majesty's treasury in London, to provide for the conveyance of the pauper labouring poor of the United Kingdom, who seek remunerative labour in that remote portion of the British empire.

The ignorance of the mere geographical position of our colonies is not restricted to parliamentary documents, where, among other errors, *Berbice* is designated as one of the islands of the *Bahamas*. Shippers of goods should pay special attention to the geography of the ports to which they consign goods. For instance, two vessels sail from London as advertised for Port Phillip; but there are two harbours within this immense port; one called *Hobson's Bay*, which is the haven of the city of Melbourne; and the other *Geelong*, which is nearly fifty miles distant. Goods put on board a vessel bound to Hobson's Bay, Melbourne, but consigned to Geelong, will be exposed to risk, considerable delay, and additional expense, in their transit to their proper destination. Bills of lading should therefore be made out either for Hobson's Bay, Melbourne, or for Geelong, and shipped accordingly.

The custom duties levied at Port Phillip are of the same amount as those enacted for Sydney, New South Wales. Fifteen shillings per foot is charged on all vessels inward or outward bound as pilotage dues, besides harbour dues. One shilling per bale is charged for shipment of wool from Melbourne to Hobson's Bay (the shipping port), and 5*s*. per ton for general goods.

The rates of exchange are thus stated for January, 1839:—Bills on London at thirty days' sight purchased at one per cent. discount, one-half per cent. for every additional thirty days; on Van Diemen's Land at sight purchased at two per cent. discount. Drafts on London, at thirty days' sight, under £100, issued at three per cent. premium; on Sydney, at sight, issued at one per cent. premium; on bills having a currency of not more than 100 days, eight per cent. per annum; on bills beyond that currency, ten per cent. per annum.

The revenue and expenditure has been—

Years.	Revenue.		Total.	Expenditure.
	General.	Crown or Land.		
1837	£2,979	£3,712	£6,691	£2,164
1838	6,734	37,194	43,928	6,723
1839	11,475	60,889	72,364	27,854
1840	36,569	218,853	255,422	93,195
1841	81,673	78,417	159,000	167,339
1842	84,566	2,729	87,295	129,048
1843	67,066	10,508	77,574	—
1844	56,799	11,021	67,810	—
1845	66,531	23,687	90,118	51,725
1846	60,623	35,996	96,619	51,559
1847	66,892	68,049	134,942	65,758
1848	84,868	59,479	144,347	137,500

According to the *Melbourne Argus* of 18th May, 1847, the following was the financial state of the Port Phillip province for 1846:—

Receipts. — General revenue, £60,623; crown land revenue, £35,537; droits of the crown, £459 = £96,619.

Expenditure. — From general revenue, £34,695; schedule A, £5,200: schedule B, £1,769; schedule C, £3,325 = £50,768. Surplus revenue for 1846, £45,850.

The general and the land revenue is again increasing: for the quarter ending September, 1848, the general revenue was £18,180; ditto, 1849, £21,030. The land revenue for the same period was, in 1848, £20,142; in 1849, £33,410. Total, 1848, £38,222; 1849, £54,441. The returns on this head are discrepant, as some include only the *land* sales, and others the depasturing licenees.

The extent of mortgages on land, and of advances on wool and on live stock, are shown in the following statements, which are, in form, similar to the returns given under New South Wales:—

Number and Amount of Mortgages on Land, registered at Port Phillip, from the year 1837 *to* 1848 *inclusive.*

Year.	Mortgages on Town Lands.		Mortgages on Country Lands.		Mortgages on Town and Country Lands.		Totals.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
1837	—	—	—	—	—	—	—	—
1838	16	£17,260	—	—	—	—	16	£17,260
1839	89	44,868	21	£32,595	—	—	110	77,463
1840	60	73,176	19	53,768	3	£7,500	82	134,445
1841	51	42,858	40	39,765	8	25,850	99	108,474
1842	95	56,090	57	40,301	10	16,870	162	113,261
1843	69	27,238	47	48,322	18	194,853	134	270,413
1844	45	17,831	20	29,317	3	1,510	68	48,658
1845	37	12,262	25	24,461	1	10,000	63	46,723
1846	45	14,702	25	21,034	—	—	70	35,736
1847	67	19,544	30	23,487	—	—	97	43,032
1848	97	33,433	40	36,395	4	1,900	141	71,728

Amount of preferable liens on wool, and of mortgages on live stock, in the colony of New South Wales, registered at Port Phillip, since the passing of the act of Council, 7th Victoria, No. 3,—15th September, 1843, to 31st December, 1848, inclusive.

Year.	Preferable Liens on Wool.			Mortgages on Live Stock.				
	Liens.	Sheep.	Liens.	Mortgages.	Sheep.	Cattle.	Horses.	Lent.
	Number	No.	Amount.	No.	No.	No.	No.	Amount.
1843	9	37,910	£4,959	28	57,338	4,240	310	£24,131
1844	66	275,168	23,022	117	345,159	19,655	629	129,008
1845	37	168,793	11,784	71	149,536	8,175	136	44,383
1846	22	133,375	11,159	85	251,402	12,506	227	100,071
1847	43	284,202	33,790	125	539,924	22,252	480	135,907
1848	102	819,823	62,532	146	600,517	34,469	510	129,808

The liens are renewed every year, by advances on the *ensuing* clip of wool, and the same sheep may consequently be included in successive years. The mortgages of real estate are renewed every three years, on terms of mutual arrangement.

The number and description of the immigrants who arrived at Port Phillip during the year 1848, are shewn in the accompanying returns; but as the immigrants arriving in the Port Phillip district may readily pass into the New South Wales district, and *vice versa*, the return is given for both divisions of the province.

Return of the Assisted Immigration to Sydney and Port Phillip, during the year 1848.

—	Sydney.								Port Phillip.							
	—		Above 14 years.		Under 14 years.		Total	Stat. Adult	—		Above 14 years.		Under 14 years.		Total	Grand Total
	Male	Fem.	Male	Fem.	Male	Fem.			Male	Fem.	Male	Fem.	Male	Fem.		
Births on the passage.	42	44	—	—	—	—	86	—	36	30	—	—	—	—	66	152
Deaths on the passage	—	—	2	7	26	28	63	—	—	—	7	13	47	55	122	185
Number landed. . .	—	—	1514	1613	671	578	4376	3657	—	—	1227	1306	513	463	3509	7885

Note.—The average mortality was about 1½ per cent.

Return showing the proportions in which the Assisted Immigrants, who have arrived in the Colony during the year 1848, *have been taken from the several counties of Great Britain.*

England.	Landed in Sydney District.	Landed in Port Phillip District.
ENGLAND.		
Northern counties:—		
Northumberland	6	14
Cumberland	3	4
Westmoreland	2	2
Durham	16	5
Yorkshire	149	136
Lancashire	88	64
Isle of Man	4	—
Total	268	225
Southern counties:—		
Kent	102	26
Sussex	46	10
Surrey	66	23
Hampshire	47	6
Wight I.	5	54
Berkshire	48	13
Dorsetshire	32	81
Wiltshire	192	210
Somersetshire	19	85
Devonshire	177	285
Cornwall	42	—
Guernsey I	3	3
Jersey I.	3	—
Alderney	1	—
Total	783	796
Midland counties:—		
Cheshire	8	—
Derbyshire	27	2
Nottinghamshire	160	34
Staffordshire	29	4
Warwickshire	25	2
Worcestershire	28	—
Leicestershire	62	9
Rutlandshire	1	1
Northamptonshire	99	42
Buckinghamshire	215	124
Oxfordshire	66	171
Gloucestershire	76	62
Monmouthsire	—	5
Herefordshire	15	16
Shropshire	9	1
Total	829	473
Eastern counties:—		
Lincolnshire	55	40
Norfolk	62	116
Huntingdonshire	31	13
Cambridgeshire	41	83
Suffolk	85	87
Bedfordshire	59	56
Hertfordshire	37	11
Essex	30	10
Middlesex	200	64
Total	600	480
Grand Total	2,480	1,974

Wales and Scotland.	Landed in Sydney District.	Landed in Port Phillip District.
WALES.		
Carnarvonshire	—	—
Denbighshire	—	—
Flintshire	2	—
Merionethshire	1	—
Cardiganshire	—	—
Montgomeryshire	2	3
Pembrokeshire	1	3
Carmarthenshire	7	—
Brecknoekshire	1	—
Glamorganshire	6	3
Anglesea	—	—
Total	20	9
SCOTLAND.		
Northern counties:—		
Caithness	3	5
Sutherland	—	24
Ross-shire	35	86
Cromarty	—	—
Nairn	—	—
Inverness-shire	50	152
Moray or Elgin	6	5
Banff	4	5
Aberdeen	14	17
Kincardine	1	—
Forfarshire	12	15
Fifeshire	32	32
Kinross	—	—
Clackmannan	9	2
Perthshire	29	36
Orkney or Shetland Isles	6	3
Isle of Skye	—	1
Total	201	383
Southern counties:—		
Edinburgh	19	28
Haddington	4	—
Berwickshire	—	20
Roxburghshire	9	15
Selkirkshire	—	4
Peebles	1	—
Lanarkshire	65	25
Dumfriesshire	14	11
Galloway	—	2
Ayrshire	48	94
Dumbarton	3	11
Argyleshire	97	59
Renfrewshire	162	138
Stirling	21	13
Linlithgowshire	—	14
Bute	2	—
Wigtonshire	9	5
East Lothian	3	2
Mid Lothian	1	—
Total	458	441
Grand Total	679	833

Note.—The counties named are those of which the emigrants were *natives*.

Return showing the proportions in which the Assisted Immigrants, who have arrived in the colony during the year 1848, *have been taken from the several counties of Ireland.*

Provinces.	Landed in Sydney District.	Landed in Port Phillip District.	Provinces.	Landed in Sydney District.	Landed in Port Phillip District.
IRELAND.			Ulster:—		
Leinster:—			Donegal	8	58
Longford	3	3	Londonderry	38	49
Westmeath	57	30	Antrim	127	20
Eastmeath	—	—	Fermanagh	5	12
Louth	8	1	Tyrone	62	10
King's County	62	11	Down	43	2
Kildare	8	—	Cavan	24	33
Dublin	33	12	Monaghan	21	6
Queen's County	—	2	Armagh	56	36
Carlow	5	5	Belfast	1	—
Wicklow	9	5	Total	385	226
Kilkenny	57	30			
Wexford	1	—	Munster:—		
Total	243	99	Clare	177	47
			Kerry	2	—
Connaught:—			Cork	40	37
Leitrim	1	3	Waterford	—	4
Sligo	—	47	Tipperary	101	72
Mayo	1	27	Limerick	92	46
Galway	40	84	Total	412	206
Roscommon	2	2			
Total	44	163	Grand Total	1,084	694

Note.—Between the amount of the totals of this and the preceding return, and the number of assisted immigrants shown in the return (p. 627), will be observed a difference of 141, which is composed of persons who were not born in the United Kingdom; but, with few exceptions, were the children of English parents who had been resident in France. The counties given are the *native* counties.

Return of Expenditure on Account of Assisted Emigration to Sydney and Port Phillip, during the year 1848.

——	Sydney.	Port Phillip.	Totals.
Total Passage-money at the contract rate (including half-price for all above one year who died on the voyage)	45,806 12 8	37,287 17 2	83,094 9 10
Paid by the immigrants, or out of British funds	1,338 16 8	507 5 1	1,846 1 9
Paid out of the colonial emigration fund	44,467 16 0	36,780 12 1	81,248 8 1
Gratuities to surgeons, officers, constables, &c.	3,486 10 0	2,745 11 0	6,232 10 0
Total charged on the colonial fund for conveyance and superintendence	47,954 15 0	39,526 3 1	87,480 18 1

Note.—The average contract price for the conveyance of each adult passenger was £12 11s.

Ages of the Assisted Immigrants who arrived during the year 1848.

Age.	Where from.								Total.	Where landed.			
Years.	England.		Scotland.		Ireland.		Elsewhere.			Sydney.		Port Phillip.	
	Males.	Fem.	Males.	Fem.	Males.	Fem.	Males.	Fem.		Males.	Fem.	Males.	Fem.
Under 1	95	92	33	40	29	25	4	8	326	89	94	72	71
1 to 4	176	169	53	42	41	14	15	15	525	162	137	123	103
4 to 7	132	127	47	31	23	24	13	17	414	133	103	82	96
7 to 14	329	266	85	62	90	53	19	12	960	287	244	236	193
14 to 21	432	362	131	117	90	620	8	7	1,767	381	593	280	513
21 to 45	1,260	980	440	377	324	398	4	19	3,802	1,110	1,004	2,028	1,774
45 to 50	40	23	11	14	1	2	—	—	91	23	16	29	23
Total	2,464	2,019	800	683	598	1,180	63	78	7,885	2,185	2,191	1,740	1,769

Number of Assisted Immigrants who arrived during the year 1848, *who can read and write.*

Age.	Where from.				Total.	Where landed.	
	England.	Scotland.	Ireland.	Elsewhere.		Sydney.	Port Phillip.
Under 4 years:—							
Cannot read . . .	521	166	107	42	836	471	365
Read only . . .	11	2	2	—	15	11	4
Read and write .	—	—	—	—	—	—	—
From 4 to 7 years:							
Cannot read . . .	148	39	39	18	244	138	106
Read only . . .	101	34	7	10	152	91	61
Read and write .	10	5	1	2	18	7	11
From 7 to 14 years:							
Cannot read . . .	56	11	43	4	114	63	51
Read only . . .	291	62	80	17	450	243	207
Read and write .	248	74	64	10	396	225	171
From 14 to 21 years:							
Cannot read . . .	45	8	222	2	277	109	168
Read only . . .	201	35	176	6	518	322	196
Read and write .	548	205	212	7	972	543	429
From 21 and upwards:							
Cannot read . . .	154	31	152	3	340	219	121
Read only . . .	508	125	188	1	822	468	354
Read and write .	1,641	686	385	19	2,731	1,466	1,265

Trades or Callings of the Adult Males and the Unmarried Adult Females who have arrived in the Colony as Assisted Emigrants, during the year 1848.

Trade or Calling.	Where from.				Total.	Where landed.	
	England.	Scotland.	Ireland.	Elsewhere.		Sydney.	Port Phillip.
Agricultural Labourers	1,146	296	332	8	1,782	969	813
Gardeners	46	15	4	—	65	38	27
Farm Bailiffs . . .	6	—	5	—	11	11	—
Shepherds	43	114	14	—	171	77	94
Herdsmen	—	1	2	—	3	2	1
Domestic Servants . .	507	260	804	12	1,583	864	719
Carpenters	112	41	10	—	163	81	82
Masons	15	6	2	—	23	15	8
Quarrymen	5	1	1	—	7	4	3
Bricklayers	20	3	1	—	24	13	11
Brickmakers	19	6	—	—	25	20	5
Sawyers	13	8	—	—	21	16	5
Plasterers	1	—	—	—	1	—	1
Butchers	19	1	2	—	22	13	9
Bakers	7	13	—	—	20	12	8
Grocers	2	—	—	—	2	2	—
Millers	2	1	—	—	3	2	1
Brewers	1	2	—	—	3	1	2
Confectioners . . .	—	1	—	—	1	1	—
Maltsters	—	1	—	—	1	1	—
Poulterers	—	—	1	—	1	1	—
Tailors	6	4	1	—	11	7	4
Shoemakers	6	2	1	—	9	5	4
Dressmakers . . .	35	10	10	—	55	42	13
Bonnetmakers . . .	4	—	—	—	4	4	—
Strawplaiters . . .	2	—	—	—	2	2	—
Tailoresses	1	1	—	—	2	2	—
Embroideresses . .	—	—	1	—	1	—	1
Needlewomen . . .	10	1	—	—	11	—	11
Smiths	104	34	8	2	148	90	58
Wheelwrights . . .	18	7	6	1	32	19	13
Cabinet Makers . . .	8	6	1	—	15	8	7
Porters	—	1	—	—	1	1	—
Printers	—	3	—	—	3	2	1
Shipwrights	1	1	—	—	2	2	—
Flax Spinners . . .	—	1	1	—	2	2	—
Total . . .	2,119	841	1,207	23	4,230	2,329	1,902

Religious Persuasions of the Immigrants who arrived during the year 1848.

Religious Denominations.	Where from.								Total.		Where landed.			
	England.		Scotland.		Ireland.		Elsewhere.				Sydney Dist.		Port Phillip.	
	Males.	Fem.	Males.	Fem.	Males	Fem.	Males.	Fem.	Males	Fem.	Males.	Fem.	Males.	Fem.
Ch. of England .	1,764	1,428	40	32	119	304	56	58	1,979	1,822	1,103	1,035	876	787
Ch. of Scotland .	21	21	604	513	44	89	—	4	669	627	335	329	334	298
Wesleyan Method.	384	323	14	11	1	2	7	8	406	344	221	172	185	172
Other Protestants	266	224	115	103	4	1	—	—	385	326	197	171	188	155
Roman Catholics	23	19	27	26	430	784	—	8	480	837	324	481	156	356
Jews	6	4	—	—	—	—	—	—	6	4	5	3	1	1
Totals . .	2,464	2,019	800	683	598	800	63	78	3,925	3,960	2,185	2,191	1,740	1,769

To administer the consolations of religion, there are at Victoria ministers of different persuasions as follows:—church of England, one bishop and nine chaplains; church of Scotland, five chaplains; church of Rome, one bishop, and seven chaplains; Independents, Baptists, and Jews, one each. The salaries of the chaplains vary from £100 to £300 per annum.

Earl Grey has judiciously directed that aid be given for the transmission of female orphans of all religious denominations from the United Kingdom to Australia, and ordered that every practicable precaution be adopted for the safe conveyance of these friendless children, and for their protection on arriving in the colony.

At Melbourne, a building has been erected for their reception, and a similar committee to that formed at Sydney has been appointed there, consisting of the following members:—The Right Rev. the lord bishop of Melbourne; the Right Rev. Dr. Goold, Roman catholic bishop; Edward Curr, Esq., justice of the peace; the Very Rev. P. B. Geoghegan, Roman catholic vicar-general; the Rev. Irving Hetherington, minister of the Scots church at Melbourne; William Lonsdale, Esq., sub-treasurer; John Patterson, Esq., acting agent for immigration; Robert Williams Pohlman, Esq., barrister-at-law, and commissioner of the Insolvent Court; James Hunter Ross, Esq., solicitor; Andrew Russell, Esq.; James Simpson, Esq., commissioner of crown lands; the Rev. A. C. Thompson, incumbent of St. James', Melbourne. The plan has answered well, and many parentless children, who had no prospect before them, in Great Britain or Ireland, but penury, and perhaps a career of vice, have been placed in a position to become respected and opulent members of society in Australia.

The relative proportion of the population of the United Kingdom is—England, 59.6 per cent.; Scotland, 9.8 per cent.; Ireland, 30.6 per cent.

The number of emigrants sent out to New South Wales since the resumption of emigration, in 1847, has been—English, 14,088; Scotch, 3,638; Irish, 6,911; total, 24,637; being in the proportions of—English, 57.2 per cent.; Scotch, 14.8 per cent.; Irish, 20.0 per cent.

Of the Irish, 2,488 were orphan girls, who were taken as being a class well suited to the peculiar wants of the colony, and as being, for many reasons, the most eligible class of Irish emigrants that it was possible to select: they have, in general, given satisfaction in the colony. It is due to the Irish to state that they make excellent settlers in a young colony; the Celtic desire for the acquisition of land, and of thereby realizing an independence, forms an inducement to industry and frugality, which is attended with beneficial results; and many Irish who have landed without a shilling in Australia are now the owners of a considerable amount of property.

Those who are alarmed at the present deficiency of female population in Austral-Asia will have their fears removed, at least as regards the future proportion of the sexes, by the following statement, given on the authority of her Majesty's emigration commissioners. According to the latest returns, the male and female population of each of the Australian colonies was as follows:—

Colony.	Males.	Females.	Excess of Males.	Date of Return.
New South Wales:				
Sydney District.	92,389	62,145	30,244	Census of 1846.
Port Phillip do.	20,184	12,695	7,489	
Van Diemen's Land	47,813	22,313	25,500	Dec. 31, 1847.
South Australia .	21,527	17,139	4,388	Blue Book, 1848.
Western Australia	2,818	1,804	1,014	
New Zealand . .	4,996	3,835	1,161	

The number of unmarried male and female emigrants sent to Sydney, Port Phillip,

and South Australia, since 1st of January, 1848, has been, to—Sydney, males 2,182, females 3,618; Port Phillip, males 2,160, females 3,094; South Australia, males 1,692, females 2,191.

It will be seen from these returns that, both in New South Wales and Van Diemen's Land, there now exists a considerable excess of males over females. A similar disproportion exists in Western Australia, and, to a less extent, in South Australia and New Zealand. But it is not likely that the three last colonies will absorb any considerable number of female emigrants at present. The outlet for this class of emigrants must be sought principally in New South Wales or Van Diemen's Land. In regard, however, to New South Wales, it is to be observed that the disproportion between the sexes is continually and rapidly decreasing. In 1836, the number of males and females in the colony was—males 55,539, females 21,557; being in the proportion of five to two. In 1841, the numbers were—males 87,298, females 43,558; being in the proportion of four to two. In 1846, the numbers were—males 112,573, females 74,840; being in the proportion of three to two. And a further analysis of the last census (that for 1846) will show more clearly both the cause of the existing disproportion and the rate at which it may be expected to right itself. Thus, in the population under twenty-one years of age, the number of males and females is very nearly equal; between twenty-one and forty-five, the proportion of males to females is not quite two to one; and, among those upwards of forty-five, not quite three to one. The actual numbers are—under twenty-one, males 40,071, females 39,779; twenty-one to forty-five, males 59,009, females 30,315; forty-five and upwards, males 13,493, females 4,746; total, males 112,573, females 74,840. It is evident, therefore, that in the course of a very few years, as the old convict population* dies off (and, excepting in 1849, no additions have been made to it by transportation for several years past), the disproportion of the sexes will disappear, even without any special measures for that object.

The average retail price of provisions and clothing in the district of Port Phillip, quarter ending 31st March, 1849, was as follows:—

Wheat, 4*s.* per bushel; bread, first quality, 2*d.*; second quality, 1½*d.*; flour, first quality, 2½*d.*; second quality, 1¾*d.*; rice, 3½*d.*; oatmeal, 5*d.*; tea, 2*s.* 1*d.*; sugar, 3½*d.*; coffee, 11*d.*; sago, 9*d.*; fresh meat, 2*d.*; salt meat, 2*d.*; fresh butter, 1*s.* 3*d.*; salt butter, 1*s.*; English cheese, 1*s.* 3*d.*; colonial cheese, 7½*d.*; salt, 1½*d.* per lb.; potatoes, 8*s.* per cwt.; colonial wine, 6*s.*; imported wine, 15*s.*; brandy, 25*s.*; colonial beer, 1*s.* 10*d.*; imported beer, 3*s.* 6*d.* per gallon; candles, 5*d.* per pound; lamp oil, 2*s.* 9*d.* per gallon; soap, 5*d.* per pound; starch, 11*d.*; blue, 2*s.*; colonial tobacco, 2*s.* 6*d.*; imported tobacco, 4*s.* Moleskin jackets, 8*s.* each; moleskin coats, 14*s.* 6*d.*; waistcoats, 5*s.*; moleskin trowsers, 7*s.* per pair; flushing trowsers, 11*s.*; coloured shirts, 2*s.* 8*d.* each; strong boots, 12*s.* 6*d.* per pair; strong shoes, 10*s.*; shepherd's coats, 18*s.* each; socks, 10½*d.* per pair; handkerchiefs, 9*d.* each; straw hats, 5*s.*; print dresses, 6*s.*; merino dresses, 15*s.*; flannel petticoats, 7*s.*; calico petticoats, 2*s.* 10*d.*; stockings, 1*s.* 6*d.* per pair; shoes, 7*s.*; caps, 2*s.* 10*d.* each; shawls, 10*s.*; shifts, 3*s.*; stays, 6*s.* per pair; check aprons, 1*s.* each; straw bonnets, 4*s.*; flannel, 2*s.* per yard; calico, 7*d.*; blankets, 13*s.* per pair; sheeting, calico, 1*s.* per yard; mattresses, 10*s.* 6*d.* each; rugs, 5*s.*

Average Wages of mechanics, &c., in Port Phillip district, quarter ending 31st March, 1849.

Trade or Calling	Average Wages. Town, per diem.	Average Wages. Country, per annum.
	s. *d.*	
MALES:—		
Carpenters	6 0	£43
Smiths	6 0	39
Wheelwrights	5 6	39
Bricklayers	6 0	40
Masons	6 0	40
Farm Labourers	—	23
Shepherds	—	21
FEMALES:—		
Cooks (Plain)	—	16
Housemaids	—	14
Laundresses	—	14
Nursemaids	—	13
General House Servants	—	14
Farm-house Servants, Dairywomen, &c.	—	14

Note.—In the case of the country labourers, the price paid for their services includes board and lodging, which consist of a dwelling, with a ration of 10lbs. meat, 10lbs. flour, 2lbs. sugar, and 4 oz. tea (or milk, in lieu of sugar and tea), per week. The wives of farm labourers with families do not receive this amount of money wages, as a sufficient quantity of food is generally allowed for the support of their children, and a corresponding deduction is of course made.

The expense of erecting a country dwelling suitable to an agricultural labourer is from £5 to £20, according to the materials, the locality, and the extent of accommoda-

* In Victoria, as well as in New South Wales, the leaven of a convict population, whose religious and moral instruction was neglected, have, in a comparative degree, caused a considerable amount of crime. The convictions in Melbourne, in 1848, were—murder, 1; manslaughter, 2; shooting, wounding, &c., 6; robbery, 8; burglary, 2; housebreaking, 1; stealing in dwelling, 5; larceny, 51; forgery and uttering, 13; horse stealing, 9—total felonies, 98. Misdemeanours—assault, 10; riot and assault, 15; bribery, 1; obtaining money under false pretences, 1; libel, 1—total, 28. Capital convictions, 1.

tion; but country labourers are provided with rent-free dwellings by their employers.

The rent of a town lodging suitable to a mechanic and his family is from 4*s*. to 6*s*. per week.

There is no fund in the district for the relief of the destitute poor; but there are at Melbourne two societies, viz., the Stranger's Friend and the St. James's Church societies, which afford assistance to the poor and sick. Some immigrants have been rationed at the public expense.

It is not possible to say what amount of labour Victoria province is capable of receiving. According to the area and fertility of the soil, 20,000,000 people could with ease be sustained; the cry still is—*Give us labour*. This is shown in the following paper, compiled from returns from the principal benches of magistrates in the district of Port Phillip, showing the agricultural and other productions, and the demand for labour, &c., in each of the districts named, in the first quarter of the year 1849:—

Districts.	Principal Agricultural and other Productions of the District.	Domand for Labour, and description of Labourers required.
Melbourne . . .	Wheat, oats, potatoes, barley, vegetables of all sorts in abundance.	Most parts of the district are still requiring labourers; the city and vicinity a little better supplied than heretofore, in consequence of late arrivals of immigrants. All kinds of labour required.
Western Port . .	Wheat, oats, potatoes, and maize . .	There is still ample room for any number of immigrants likely to arrive; but single men and young married people without many children are generally preferred in the bush. Shepherds and farm servants are the descriptions of labourers in request.
Portland . . .	Wheat, oats, hay, vegetable, wool, hides, tallow, black oil, black cattle, and sheep.	The scarcity of labour was never more severely felt.
Geelong .	Wheat, barley, oats, potatoes, and all kinds of vegetables	The families of mechanics exceeding three, without adults, may probably meet with difficulties on their arrival. Domestic servants, farm servants, and shepherds are in request.
Murray	All kinds of grain	Agricultural and pastoral labourers are in request.
Gipps Land . . .	Grain, wool, and fat stock for exportation	Shepherds, stockmen, and farm labourers are in request.

The following statement is compiled from returns from the principal police divisions of the district of Port Phillip, showing the rates of yearly money-wages given in each division in the first quarter of the year 1849—food and lodging being provided by the employers:—

Trade or Calling.	Melbourne.	Western Port.	Portland.	Geelong.	Murray.	Gipps Land.
Carpenters . .	—	£52	£38	£40	—	—
Smiths . . .	—	40	38	40	—	—
Wheelwrights	—	40	38	40	—	—
Bricklayers .	—	—	—	40	—	—
Masons . . .	—	—	—	40	—	—
Farm labourers	£16	27	28	20	£20	£30
Shepherds . .	16	23	27	18	20	25
Cooks . . .	16	17	26	—	—	—
Housemaids .	14	12	20	—	20	—
Laundresses .	14	17	28	—	—	—
Nursemaids .	13	10	18	—	—	—
Farm Servants	14	17	—	—	—	—
House Servants	14	17	24	—	—	—

Country lands, as in the other Australian colonies, are offered for sale, from time to time, by public auction, at an upset price, as fixed by act of Parliament, of 20*s*. per acre; but farms enclosed, and partially or wholly cleared of timber, may occasionally be obtained, on a lease of three to five years, at a rent varying from 5*s*. to 10*s*. per acre. The number of leaseholders in this district, as well as in New South Wales, is increasing; and such a course of procedure is advisable for newly-arrived immigrants who have but little capital, are not acquainted with farming, and require time and practice to understand a pursuit which at first sight appears very simple, but which really requires more watchfulness, steady labour, frugality, and even scientific knowledge, than any of the ordinary branches of manufacturing industry.

In 1848, the squatting licences issued for Port Phillip were, *within* the then settled districts, 383; *without* them, 18,863; total, 19,246; and the land sold in Port Phillip was 18,007 acres, for £24,030.

Squatters holding land under lease from the crown for pastoral purposes may, by permission of the crown commissioner for the district, transfer their "run" to another person. The price is determined not merely according to the quantity of land in the lease or "run," but by the healthy condition of the sheep, the purity of the breed, supply of water, contiguity to a shipping port, the quality of the pasture, and other circumstances. "Clean stations" average a sum of 9*s*. to 12*s*. for each head of sheep; the purchaser receiving also huts, hurdles, fencing, and implements, and taking the stock at a

valuation. A cattle station, which is considered less profitable than a sheep run, sells at the rate of 30*s.* to 40*s.* for each beast. Superior sheep and cattle sell at higher rates. Each sheep "run" carries at the least 4,000 sheep, or an equivalent number of horned cattle, for which a rental is paid to the crown of £10 per annum, and £2 10*s.* for every additional 1,000 sheep, or equivalent number of cattle.

Every large sheep or cattle "run" has an overseer, whose salary ranges from £50 to £200 per annum. The firm of Boyd & Co., it is said, paid their overseer £800 per annum; but their sheep amounted to nearly 200,000. Some young men judiciously commence as overseers, and learn their business before they invest their capital in stock. The *homestead* is the head-quarters of the overseer, who visits the distant flocks, supervises the shearing, the packing in the wool presses (with which the wool-sheds are each provided), and the despatch of the drays with the packs to Melbourne, Geelong, or Portland. Spacious steam boilers are also being attached to each homestead, for converting the fat into tallow, ready for shipment to England.

It is due to the class of Australian gentlemen termed the "squatters," to state, that but for them, Port Phillip would have been reduced to as low a condition as South Australia was before the discovery of its copper mines. Those who bought land largely at the government auction sales in Sydney and Melbourne, were ruined; their purchases were no more proof of the soundness of the "Wakefield theory," than was the purchase of scrip during the railway mania a proof of the prosperity of the country. In both instances, capital was transferred from industrious pursuits to be invested in gambling speculations. The squatters remedied the error; for like a young oak tree, around which a band of iron had been placed to prevent its growth, but which the expanding bark soon eveloped in its folds—so the squatters passed the settled boundaries of Port Phillip and of New South Wales, and found food for their increasing flocks and herds, which an act of Parliament would otherwise have prevented. By this means staple exports of wool, tallow, hides, horns, skins, and meat, were created; the colonies were enabled to import in return for their products, British manufactures; labourers were required to tend their sheep, the steady pursuit of wealth by industry and perseverance took the place of land gambling, the settlements were rescued from the gripe of "land-sharks," and the wide-spread ruin caused by the "Wakefield system," to some degree mitigated. But the injurious effects of an erroneous course of policy are not so immediately remediable; unfortunately, a class-interest is created, who having paid a high price for their land, are not desirous of a reduction in the market price; some of the squatters also, knowing they can rent a "run" from government capable of feeding 6,000 sheep for £10 a year, prefer the maintenance of the present system, which practically prevents the sale of any land, except in the neighbourhood of towns, or for some special purpose. Until, however, a method be adopted, by which land may become a marketable commodity, no improvement can take place in Victoria province in any degree commensurate with its immense *agricultural* capabilities. Emigrants who can obtain fine land at 3*s.* to 5*s.* an acre, in British America, the United States, and Natal, will not be induced to pay 20*s.* in Australia. It is quite a different thing, to make free grants of blocks of several thousand acres to persons without capital, and to sell it at a moderate price; and yet the argument for fixing a price on land far beyond its real value, is based on the error alleged to be committed in Western Australia, where the granting of land free was not the cause of failure, as will be subsequently shewn.

In 1835 there were sold in the United States, about 12,000,000 acres of land; in 1836, about 20,000,000 acres; in 1837, the quantity fell to 5,000,000 acres; in 1838, 12,251,966 acres were offered for sale by public auction, and only 1,388,733 acres sold; the price paid was $1,749,401, or about $1¼ (5*s.* 7½*d.*) per acre. The sales declined annually, until 1841. In 1842, they again increased to 1,600,000 acres, and advanced gradually to 2,200,000 acres, in 1847. Since 1819, the price has not exceeded $1¼ per acre; and it is now proposed to grant a certain quantity of land to every single or married immigrant who settles in the States. This is the best mode of attracting labour, and until something effective be done by reducing the price of land in Australia to its proper value, our surplus population will proceed by tens of thousands to America, compared with tens of hundreds who may be induced to voyage 15,000 miles to Australia.

BOOK IV.—SOUTH AUSTRALIA.

CHAPTER I.

ORIGIN—HISTORY—DISASTERS AND PROGRESS.

The history of this now thriving settlement affords a remarkable instance of the truism that men and nations frequently overlook the wealth and advantages which are, as it were at their own door, and seek a doubtful good by speculative efforts remote from the practical field of operation which lies immediately before them. For nearly fifty years England had possessed a colony in New South Wales, and had been acquainted with the salubrity of the climate, the fertility of the soil, and the maritime advantages of the position, before any further inquiry was made into the intrinsic value of other parts of the vast island-continent over which her dominion had been established. As in other instances a superficial examination of the mere coast-line had been deemed sufficient; and one of the naval officers employed, and considered with reason the first authority on the subject (Captain P. P. King, R.N.), stated before the Philosophical Society of New South Wales, in the year 1822, that "*the South coast of Australia is barren, and in every respect useless and unfavourable for colonization.*" How far this sweeping condemnation of a country larger than Great Britain, of which moreover only a small part even of the coast could have been seen by Captain King, is consistent with fact, will be seen in the following pages.

The inland discoveries of Oxley, Cunningham, and others, to the westward, northward, and southward of Sydney, from 1817–18 to 1827–28 (see page 383), and the extreme drought of three years' continuance induced reflecting persons to consider whether that portion of Australia open to the south winds of the Pacific might not be found better supplied with periodical rains, and that the dip of the land would be as in other parts of the world, and especially in the eastern hemisphere, from north to south, consequently that the great water-courses of the Blue Mountains, which served as drains for the country west of the sea-coast range, would be found to have a southerly direction. This opinion I expressed at the time in Australia, and stated that it was founded on what I had witnessed in Southern Africa, Madagascar, and other adjacent regions.

To Captain Sturt, an officer then serving with his regiment in New South Wales, belongs the great merit of solving this problem, of pointing out the capabilities of South Australia for a colony, and of giving an additional stimulus to the interior exploration. The adventurous journeys of Captain Sturt have been detailed (pages 383–384); after a perilous navigation of nearly a thousand miles, in a frail boat, on an unknown stream, with rapids, shallows, sand-spits, and sunken trees; the banks crowded with bands of hostile natives, and the country whither he was being hurried totally unknown, this gallant officer and his brave companions found their toils rewarded by arriving in the early part of the year 1830 at a large lake, from whence they soon reached the Pacific Ocean at Encounter bay, in the meridian of 138° 56′ E. The loss by accident of a portion of his provisions compelled him to hasten his return towards Sydney, up the Murray, an undertaking far more arduous than his course down that stream with the current. This severe labour was successfully accomplished after eighty-eight days of incessant exertion and sufferings, which produced insanity in one of the party, and temporary blindness in their heroic leader. "It is impossible," says Major-General Sir Charles James Napier, "to read the account of Captain Sturt's expedition down the Murray without feeling much admiration for our countryman and his companions — an intrepid enterprize! Unanimated by the glory of battle, yet accompanied by the hardships of a campaign, without splendour and without reward. This little band of undaunted men well knew that severe trials awaited their bold adventure, perils from men, from water, and from starvation; and if they fell amidst these dangers, no fame would attend their memory,

their courage would be unheard of, and their death mourned only by a few friends. Nor was the fortitude with which they extricated themselves from the dangers of the desert less to be admired than the boldness with which they entered these wilds."

The brave ever respect the brave, and this desire of a distinguished officer, who often met death face to face in the battle-field, to "express the admiration he felt for these intrepid explorers, and to spread the record of their names,"* will be appreciated by all who estimate at its right value what is noble in man. But it is only those who have themselves traversed trackless wilds, traced to their sources rivers hitherto unknown, and navigated stormy and unsurveyed coasts, amidst tribes of savages more bloodthirsty than the tiger, who can estimate at its true worth the value of the services which Sturt, Mitchell, Leichardt, Eyre, Grey, Cook, Flinders, King, Stokes, Blackwood, Jukes, and other really great men have rendered by their discoveries in Australia.

On the return of Captain Sturt to Sydney, he stated, in his official report, an opinion of the country he had explored, as follows:— "Cursory as my glance was, I could not but think I was leaving behind me the fullest reward of our toil in a country that would ultimately render our discoveries valuable. * * * My eye never fell on a region of more promising aspect, or of more favourable position, than that which occupies the country between the Lake and the ranges of St. Vincent's gulf, and continuing northerly, stretches away without any visible boundary." Sturt added, "that a closer survey of the interjacent country (from Encounter bay up St. Vincent's gulf) would, he believed, be attended with the most beneficial results."

Fortunately, the then governor of New South Wales saw the importance of prosecuting further inquiries in this new region. Governor Darling immediately acted upon the recommendation of Captain Sturt; and Captain Barker, of his Majesty's 39th regiment, then about being recalled from what was considered a useless position—King George's Sound—was directed to ascertain how far the opinions of Captain Sturt were correct. Barker arrived in Gulf St. Vincent in April, 1831, and while engaged in exploring the country in the neighbourhood of Lake Victoria, was killed by the aborigines. Sturt pays a well-merited tribute to this victim of the treacherous savages of Australia, and describes his lamented brother officer as mild and affable, possessing the esteem and regard of every companion, and the respect of every one under his command; zealous in the discharge of his public duties; honourable and just in private life; a lover and a follower of science; indefatigable and dauntless in his pursuits; a steady friend; charitable, kind-hearted, disinterested, and sincere; in him the crown lost one of its most valuable officers, and his regiment one of its most efficient members. The Mount Barker district, named after this good man, evidences the grateful appreciation of his character felt by the colonists.

Mr. Kent, one of the party attached to the mission of Captain Barker, fully corroborated the report of Captain Sturt. He stated that the soil was rich; there was abundance of the finest pasturage; no lack of fresh water; and that it was "a spot, in whose valleys the exile might hope to build for himself and for his family a peaceful and a prosperous retreat." The intelligence of the discoveries of Captain Sturt, and their confirmation by Mr. Kent, produced in England an anxious desire to form a colony in South Australia; and in 1831, a committee was formed to consider the subject. I attended some meetings, about this period, in the Adelphi chambers, but finding it was resolved to fix a high price on the land, declined co-operating personally, but gave every aid in my power towards the extension of our occupation of the Australian territories. Great credit is due to Mr. Gouger, who, after he had formed three or four provisional committees, was often left alone, to work out, at his own expense, the noble object he had in view. In 1834, an influential committee was formed, which included eighteen members of the house of Commons, who resolved to carry out what was termed the "self-supporting system," by which the colony would be no expense to England, as money would be obtained by the sale of waste lands, whereby the labour would be conveyed from the United Kingdom, and the formation of a prosperous settlement would necessarily ensure the means of an adequate revenue for its local government. This was no new idea; it was not a theory, as it had been termed: the plan had been practised in the earlier British colonies in the western hemisphere; and for some years the sale of waste lands in the

* *Colonization, particularly in South Australia*, by Major-General Sir Charles James Napier.

United States, and the formation of colonies in the wilds of the "far west," were known to have been very successful.*

This system was marred in its application to the crown lands of Great Britain, by the attempt to engraft on it principles and regulations which neutralised or perverted its effect. As to what Mr. Wakefield somewhat vaguely terms a "sufficient price," neither himself, Lieutenant-Colonel Torrens, or any of its advocates, have yet agreed what this "sufficient price" is; and, in the search after this *ignis fatuus*, New South Wales would have been ruined, had not the squatters evaded the impolitic law which fixed twenty shillings as the minimum price for all lands—good, bad, or indifferent. To Mr. Wakefield is, however, due the merit of having urged the formation of a colony at South Australia, by the sale of the crown lands. Whether he was the author of the pound an acre price, or the two or three pounds per acre, subsequently proposed, does not clearly appear in his recent work.† Colonel Torrens avowed his advocacy of the high price.

The public, easily captivated with an apparently novel idea, and having little leisure to inquire either how much of it is new, or how much of it is applicable to the subject in question, are too ready to take on trust assertions for truths, and to believe (for a time), that what is popularised, must be correct. Had Mr. Wakefield, in pursuance of his meritorious efforts to establish a British colony in South Australia, confined his views to the retention of the price fixed in 1831 by Viscount Goderich and Lord Howick (now Earl Grey), viz., 5*s.* per acre, much suffering and great distraction of legislation would have been avoided. I am personally unacquainted with Mr. Wakefield, and entertain no adverse feeling to his projects; but am, on the contrary, disposed to appreciate to the fullest extent exertions which have had for their object systematic colonization. The field for thought and action afforded by our vast colonial empire is wide enough to admit of every variety of opinion, and it is that very diversity which appears, under Providence, best calculated to elicit truth and awaken the mind of the nation to the deep and daily increasing importance of the subject; for colonization, it must be remembered, is a national—emigration, an

* The property of the soil of the whole of the territory of the United States, is vested, by the consent of the several state governments, in the general government of the confederation at Washington, excepting such lands as belong to private individuals, or have been appropriated by the separate states for educational and other purposes. The extent of this property is, certainly, not less than one thousand million acres, which at 2*s.* per acre, shews a value of £100,000,000 sterling. The public lands have long been considered in the United States a valuable source of revenue; in 1776, Silas Deane laid before congress a plan for the sale and settlement of the territory north-west of the Ohio, and the calculations of the future value of this region, caused the first conflict of opinion among the several states. On the 20th May, 1785, an ordinance was passed by congress, for ascertaining the mode of disposing of lands in the western territory. Under this ordinance, 121,540 acres were sold, and three large tracts disposed of by what was termed "special contract." The price varied from one dollar to two-thirds of a dollar per acre. On 10th May, 1800, an act of congress defined *the land system* of the United States, of which the first feature was the rigid survey of the public lands, founded upon a system of true meridians. The largest division was a township comprising thirty-six square miles = 23,040 acres, this was sub-divided into sections of one square mile each, and further into quarter sections = 160 acres. In each district a land-registry office was established, with two public officers appointed by the President of the United States—a registrar, and a receiver of public monies, with a salary each of $500 a year, and a commission of one per cent. on the moneys paid into their office. For some years credit was allowed on all purchases of public lands; but this caused speculations, arrears, and relinquishment of purchases. But in the year 1820, an act of congress altered this system, substituted cash payments for the credit system, and reduced the *minimum* price at which waste lands were to be offered for sale by public auction, from two dollars to one dollar and a quarter per acre. Lands not thus sold were subsequently open to purchasers at the *minimum* price. The value of the public lands sold in the twelve land states of the United States from 1787 to 1st January, 1848, was, in dollars, as follows:—Ohio, $13,599,602; Indiana, 13,902,325; Illinois, 14,740,417; Missouri, 9,643,931; Alabama, 10,764,654; Mississippi, 9,714,942; Louisiana, 2,908,356; Michigan, 9,000,720; Arkansas, 2,832,277; Wisconsin, 4,309,669; Iowa, 2,227,828; Florida, 926,613. Total $94,551,334; which, at fifty pence the dollar, is equal to £19,698,184 13*s.* 4*d.* The area of these twelve land states is given at 392,579,200 acres, of which 304,376,348 acres are surveyed, and 78,812,286 acres are unsurveyed; 100,209,656 acres have been sold; and, on 1st January, 1849, 289,961,951 acres remained unsold. During 1847, 2,521,305 acres sold, for $3,296,404. The quantity of land offered for sale in the year 1849 was 9,113,400 acres. In the territories of the United States, north and west of the regularly organized states, there are 208,332,000 acres of land to be sold at about 5*s.* an acre. What prospect have our colonies for selling land at 20*s.* an acre in Australia or New Zealand?

I must reserve for the conclusion of this work, further details on this important subject; but sufficient has been stated to shew the fallacy of the idea, that Mr. Wakefield had "*invented* a system for the sale of waste lands;" whereas a *judicious* system has been in operation in the United States for fifty years.

† *A View of the Art of Colonization*, by E. G. Wakefield. London: 1849.

individual—undertaking. My opposition, therefore, refers neither to individuals nor to theories, but to what I conceive to be the proved error of fixing a price on the waste lands of our colonies so high, as to drive emigrants with but limited means to the United States, where land is obtainable on moderate terms, and where, I believe, it is now contemplated to give every respectable immigrant a limited number of acres free of all charge. With this preliminary explanation, I proceed with an account of the formation of the colony of South Australia.

By the persevering exertions of Messrs. C. Buller, Wakefield, Whitmore, Grote, Angas, Torrens, Hutt, Rowland Hill, and other gentlemen, aided by the Duke of Wellington in the house of Lords, an act was passed on the 15th August, 1834, by the Imperial Parliament (4 & 5 William IV., c. 95), under which South Australia, within certain defined boundaries, viz., "that part of Australia which lies between the meridians of 132° and 141° of E. long., and between the Southern Ocean and 26° of S. lat., together with the adjacent islands thereto," were declared to be a British province. A board of three or more commissioners was to be appointed by the crown under the act, to carry the intentions of the legislature into effect; this board was to be represented in the new colony by a resident commissioner; no convicts were to be sent to South Australia; the minimum price of land was fixed at 12*s.* per acre, to be disposed of in public by auction or otherwise, as the commissioners might deem best; the proceeds of all land sales to be applied to the purpose of sending out free emigrants; adult persons of the two sexes, as far as possible, to be in equal proportions of both sexes, and not exceeding the age of thirty years; no poor person—husband or a wife—could be conveyed alone to the colony, nor without their children; the commissioners were empowered to borrow money on bonds to the extent of £200,000, to pay the expenses of the colony, and to make it a charge on the revenue, produce of rates, duties, and taxes, as a colonial debt; whenever the population amounted to 50,000, a constitution was to be granted, and until this period had arrived, his Majesty might empower persons resident in the colony to make laws, levy rates, duties, and taxes, subject to the approbation of the king in council; the act was not to be in force until the sum of £35,000 had been raised by the sale of land. The commissioners were further required to raise £20,000 by the issue of bonds, as South Australian revenue securities, and this sum was to be invested in the public funds, as a guarantee that the colony would at no time be a charge on the British exchequer. If within ten years from the date of this act of Parliament, there were less than 20,000 natural born subjects of his Majesty in the province, all the public lands then unsold would be liable to be disposed of by his Majesty in such manner as shall seem meet.

In May, 1835, the commissioners were appointed, Colonel Torrens chairman. They fixed the price at 20*s.* an acre, but it was found too high a price; for after the commencement of the sales, and notwithstanding incessant efforts for two months, considerably more than half the quantity of land required to be disposed of, in order to commence operations, remained unsold. The commissioners therefore announced, on 1st October, 1835, that "the price of land included in the preliminary sales should be reduced to 12*s.* per acre." The first purchasers were, accordingly, entitled to receive for £81, one acre of town land, and 134 acres of country land. This was little more than 12*s.* per acre, and a fair price, considering that an acre of *town* land was given. It was, nevertheless, still found difficult to fulfil the conditions of the act of parliament.

In this dilemma, an association, termed the *South Australian Company*, was formed, which owed its origin to Mr. G. F. Angas, who, with his own capital, and that of a few friends, who had confidence in his prudence and integrity, raised, at their own risk, the sum necessary to purchase a considerable quantity of land. When success, in going forward, thus became certain, these gentlemen handed over their interest in the project to a company, under the above designation, merely receiving five per cent. per annum for the use of the cash advanced. Mr. Angas, a gentleman of considerable experience, and of a fine energetic spirit, became chairman of the company, which dates its establishment from the 22nd of January, 1836, when £200,000 was subscribed, in 4,000 shares of £50 each, on which £5 per share were immediately paid. 13,770 acres (including 102 acres of the site of the first town) were purchased from the South Australian commissioners, on favourable terms, such as—the selection of their own la-

bourers; the reduced price of 12*s.* per acre, in lieu of 20*s.*; the right of purchasing one acre in the metropolis of the colony for every 134 acres of country land, this privilege being limited to 437 sections; the right, to purchasers of 4,000 acres and upwards, of selecting in any district they pleased; the privilege of leasing, for 10*s.* per annum, 640 acres of pasturage for every forty acres purchased, while non-proprietors had to pay 40*s.* for the same quantity.

The commissioners continued until the end of February, 1836, to sell land at 12*s.* an acre, to all who were able to satisfy them that the purchasers would take out adequate capital, to be employed in the improvement of the colony. The holders of the first 437 land orders were to have priority of choice, of both land and pasturage, over all others. Any one paying in advance for 4,000 acres had the right of requiring a survey to be made of any compact district not exceeding 40,000 acres, and, within a reasonable time after such survey, to select his 4,000 acres from any part of such district, before any other applicant. The privilege of selecting servants and labourers, for a free passage from England to the colony, was allowed to all purchasers in England, at the rate of one person for every £16 expended in land.

By the 24th section of the act, the South Australian commissioners were required to invest £20,000 in government securities, as a guarantee against the colony becoming a charge on England; and, as they were authorized to raise a loan of £200,000, at a rate not exceeding ten per cent. (18th section), they issued tenders for a loan to the amount of £80,000, to be received by instalments. Tenders, however, were received to the extent of only £13,000, at ten per cent. interest, and on the terms that the loans were not to be paid off, nor the interest reduced, for several years. The commissioners then proposed to raise £100,000, at six per cent., by bonds, to be issued at £80, for £100, and not to be paid off in less than twenty years. They could have raised the money on these terms, but the solicitor-general was of opinion that the act of Parliament did not authorize such a proceeding. After considerable delay and much private exertion, Mr. Wright, then an eminent banker in Henrietta-street, Covent-garden, and who was at that period one of the South Australian commissioners, agreed, on the 12th of November, 1835, to advance £30,000 to the South Australian commissioners, on the following terms:—£20,000 to be paid down on the 18th inst., and the remaining £10,000 on the 15th of December following. The loan not to be paid off for ten years from the date of advance, and to bear interest at ten per cent. per annum, payable half-yearly, in London; a commission of two per cent. to be paid to Mr. Wright on £25,000. These terms were accepted; £20,000 were lodged in the Three per Cent. Consols, in the names of three trustees nominated by his Majesty's government, and the secretary of state approved of the transaction.

By these proceedings, but chiefly, as before observed, by the large purchases of the before-mentioned company, the South Australian act was brought into operation; and the crown appointed as governor of the province, on the recommendation of the commissioners, Captain Hindmarsh, a brave and experienced sailor, but totally unfit for a position foreign to all his past pursuits. Mr. J. H. Fisher was nominated resident commissioner, and Lieutenant-Colonel Light surveyor-general.

On the 1st of March, 1836, the commissioners raised the price of land to 20*s.* per acre, and announced that, at any time during the first year from the period of the landing of the governor, the price might be raised to 40*s.* per acre, by the colonial resident commissioner. All sales were to take place in the colony, but investments conferring the right to select labourers might still be made in this country; subsequently, however, sales were also made in England.

On the 20th March, 1836, the first vessel despatched by the South Australian commissioners, named the *Cygnet*, of 239 tons, sailed from London: she was followed by the *Rapid* brig, of 162 tons, both fast-sailing craft, under the orders of Colonel Light, the surveyor-general, accompanied by his surveying staff, who were ordered to prepare for the reception of the governor, and the chief body of settlers who were to follow in H.M.S. *Buffalo*, and two other vessels. The *Cygnet* and the *Rapid* were each fully equipped to act independent—supplied with provisions for one year, with proper surveying instruments, arms, ammunition, tents, clothing, utensils, tools, medicines, and necessaries of all kinds likely to be required; also with a boat fitted for surveying the various inlets, and a portable boat on a light carriage, for use in land explorations. The

expedition was composed, besides the surveying staff, under Colonel Light, of Captain Lipson, R.N., as harbour-master, two surveyors, and thirty mechanics and labourers, including three carpenters, two smiths, four woodmen, one shoemaker, and two or three gardeners, besides the crews of the vessels. Colonel Light was in the *Rapid*, with Messrs. Field, Pullen, and Hill, as first, second, and third officers; Messrs. Jacob and Symonds, as assistant-surveyors; and Mr. John Woodford, as surgeon. The *Cygnet* contained Mr. Kingston, the deputy surveyor-general, Captain Lipson, Messrs. Finnis, O'Brien, Neale, Hardy, and Cannan, as assistant-surveyors; Dr. Wright, as surgeon; Mr. Gilbert, as storekeeper; and a few passengers. As nothing was really known of the mainland, the vessels were ordered to proceed first to Nepean bay, in Kangaroo Island, which was to be the place of rendezvous, where the gardeners were to be landed—a plot of ground, stocked with vegetables; the provisions and stores not required for the purposes of the survey were to be disembarked, together with the wives and families of the officers and men, if arrangements could be made for their temporary accommodation and safety. The surveyor-general was then to proceed to examine the coast in the central parts of the intended colony, excepting the parts surveyed by Flinders; his attention was particularly directed to Nepean bay and Port Lincoln, but more especially to the line of coast from the east of Encounter bay to the north of Gulf St. Vincent, and the inlet in 34° 40′ S. lat. was pointed out as demanding careful examination.

Wherever a good harbour was found, the land around for a considerable distance was to be explored, and if suited for the site of even a secondary town, to be surveyed. The responsibility of selecting a position whereon to found the future capital of the province devolved on Colonel Light, who although instructed to confer with the governor on the subject, (should he arrive before the selection was made,) and to pay due regard to his opinions and suggestions, was fully authorised to act according to his own convictions. The South Australian commissioners in London possessing no knowledge of even the coast-line, could only lay down general rules for the guidance of their surveyor; such as a commodious harbour, safe and accessible at all seasons of the year, a considerable tract of fertile land immediately adjoining, an abundant supply of fresh water, facilities for internal transit, and for communication with other ports, distance from the limits of the province, "as a means of avoiding interference from without in the principle of colonization," and the neighbourhood of extensive sheep walks; and as of secondary value, building materials, such as timber, stone, brick, and lime; facilities for drainage and coal. When the most eligible spot was selected, the streets were to be laid out of ample width, arranged with reference to convenience, salubrity, and beauty, and with the necessary resources for squares, public walks, and quays. The district around the intended capital was to be arranged, mapped, and divided into sections of 134 acres each, of a form convenient for occupation and fencing, and a road reserved adjoining each section. All land on the coast within not less than 100 feet of high water-mark, and at least sixty feet along each side of a navigable river, and around every lake or other sheet of water, to be reserved as a public road. Collision with the natives was to be avoided, the wild animals to be considered as their property, and sporting by the Europeans to be discouraged as much as possible, and when districts were found inhabited, to be prevented altogether.

The *Rapid* reached Nepean bay, Kangaroo Island, on the 19th August, 1836, and the *Cygnet* on the 11th September following; they found three vessels belonging to the South Australian Company which had previously arrived, viz.—on 27th July, 1836, the *Duke of York*, which carried out emigrants and the colonial manager of the company (Mr. Samuel Stephens), who was subsequently thrown from his horse when riding on Mount Lofty range, and died on the spot; on the 30th July, the *Lady Mary Pelham*, and on the 16th August, the *John Pirie*, under the command of Captain Martin. The manager of the South Australian Company had landed, built a mud hut, surrounded it with a small battery, and hoisted the British ensign. The *Africaine*, Captain Duff (an able and energetic commander), arrived early in November, with emigrants, having on board the colonial secretary and the emigration agent. The *Tam O'Shanter*, *John Renwick*, and *Coromandel*, each with emigrants, soon followed; the latter vessel carrying out a banking institution, and the advocate-general and colonial surgeon. The women and children, store-keeper, gardeners, and stores, were landed from the *Rapid* and *Cygnet*, at Nepean bay,

and Colonel Light proceeded to examine Kangaroo Island; thence explored from end to end the western shore of Gulf St. Vincent; then visited Port Lincoln, in Spencer's Gulf, where the governor, Captain Hindmarsh, was expected, in the *Buffalo*. The surveyor-general did not deem Port Lincoln eligible for the site of the chief town; but one spring of water was found, and that below high-water mark; no good or clear land was seen, and the entrance to the fine harbour considered to be surrounded by shoals, rocks, tide-ripples, and other difficulties, which rendered the approach hazardous.

The explorers then proceeded to examine the east coast of Gulf St. Vincent, where they discovered a creek about fifty miles from the open sea, which proved to be the embouchure of a fresh-water river, and appeared to Colonel Light "as beautiful and safe a harbour as the world could produce." It was found to be sheltered from every wind, abounded in smaller creeks—one branch extending seven miles, and nearly one mile wide, and with a depth of three to five fathoms, suitable for vessels of three to four hundred tons. The country, where examined, resembled English park scenery, and consisted of widely extended open plains, moderately wooded, with a rich soil clothed with luxuriant grass, and watered by numerous streams. It sloped backwards from the coast for several miles, to a line of sandy hills, intersected by picturesque valleys terminating in an elevated range, to which the name of Mount Lofty was given; behind this range lay Lake Alexandrina (now Victoria), and the country of the Murray river. Colonel Light deemed this spot the most eligible for the site of the future capital of the province of South Australia, and on the banks of the Torrens river, about seven miles inland from the anchorage, the plan of Adelaide was marked out.*

Captain Hindmarsh anchored in Holdfast bay on the 28th of December, 1836, and was immediately proclaimed governor.† Colonel Light, under the authority of the commissioners, had, as previously stated, fixed the site of the future city of Adelaide before Captain Hindmarsh arrived, who, although he had accepted the appointment on condition of "non-interference with the officers appointed to execute the surveys and to dispose of the public lands," soon acted as if he was on the quarter-deck, where no one dare question his judgment. Disputes arose between the governor appointed by the crown, the resident commissioner, Mr. Fisher, Colonel Light, and, in fact, between most of the officials.

In March, 1837, the town lots were selected; but the country lands were not allotted until May, 1838, and then only partially. The settlers, on arriving, found living very dear; the lands, for which they had paid in England, were not granted immediately; and the controversies of the authorities caused great discontent. The commissioners in England, on the 22nd of December, 1837, addressed a despatch to Lord Glenelg, his Majesty's secretary of state, complaining of the governor, who, on the 21st of February, 1838, was recalled.

The conduct of the official authorities under governor Hindmarsh appears not to have been very creditable, and made his administration of the affairs of the province a matter of great difficulty. The resident commissioner (Mr. J. H. Fisher), appointed by the Australian commissioners in London, refused to obey the authority of the governor; and when Captain Hindmarsh had dis-

* Considerable opposition was made for some time by several members of the colonial government, to the site chosen by Colonel Light, some contending for Port Lincoln, others for the neighbourhood of Encounter bay. Sir John Jeffcott, the judge, was in favour of the latter, and while endeavouring to prove the justice of his opposition, he lost his life, together with Captain Blenkinsopp, by the upsetting of a boat.

† The foundation of a new settlement in the wilderness is always an interesting ceremony, and among the ancients it was preceded by religious solemnities. On the present occasion, the course of proceeding was as follows:—as soon as H.M.S. *Buffalo*, with Captain Hindmarsh on board, came to an anchor, preparations were made for landing, and on the same day the gallant officer landed, escorted by a party of marines, and accompanied by the various official authorities, together with the ladies of their several families. They were received in the tent of the colonial secretary, by the gentlemen who had previously arrived with Colonel Light, who had fixed their temporary habitations on the plains afterwards named Glenelg. The commission of the king, appointing Captain Hindmarsh governor, was read to the assembled settlers, numbering about 300; the appointments of the members of council and of the executive government, were announced; the customary oaths of office were administered to the governor by the colonial secretary, the British flag was hoisted under a royal salute, the marines fired a *feu-de-joie*, the *Buffalo* saluted his excellency the governor with fifteen guns, a dinner, or rather cold collation, was laid out in the open air, the health of his Majesty was drunk with enthusiasm, the national anthem was played and sung, healths were given and speeches made.

missed an emigration agent, named Brown, for neglect of duty and inhumanity towards the emigrants, (one of whom, named Trollope, died in the public hospital at Adelaide, in a state of destitution,) Mr. Fisher publicly placarded *his* reinstatement of Brown. The colonial secretary, Mr. Robert Gouger, and the colonial treasurer, Mr. Osmond Gilles, fought in the streets of Adelaide publicly, and were taken into custody by the serjeant of marines, who acted as chief constable. The offenders were conveyed to government house, detained ten minutes, and then liberated, on their parole to keep the peace. The colonial secretary was aided and abetted by Mr. Mann, the advocate-general of the colony. The governor suspended Mr. Gouger from his duties as colonial secretary, who thereupon threatened to bring an action against the governor for "false imprisonment—damages, £10,000." This is a sample of the disagreeable proceedings which took place in the infant state of the settlement, of which details are given in the *South Australian Gazette*, No. 6, for September, 1837, and in other numbers.

The next recommendation of the commissioners of a governor was even more unfortunate than the preceding. One of the chief claims of Captain Hindmarsh was, that he had distinguished himself at the battle of the Nile, and fought under Lord Nelson. So, also, his successor, Lieutenant-Colonel Gawler, had been "present at many of the great sieges and battles in the Peninsula—Badajoz, Vittoria, Nivelles, Orthes, Toulouse, and lastly at Waterloo, where he commanded the right flank company of the 52nd, during the great charge on the imperial guards." What evidence the meritorious conduct of a midshipman or captain of a company at the Nile and at Waterloo could afford of the adaptation of the individual for the peculiar duties of civil governor in a young agricultural settlement, it would be hard to divine. It is quite true, that naval and military officers have occasionally (though seldom) made efficient governors of colonies; but they are exceptions to a rule. Much of the long-protracted misrule of some of our colonies may be traced to the evil of appointing soldiers and sailors as civil governors, irrespective of their aptitude and fitness for such important and difficult duties. But another opportunity will occur for the examination of this subject when treating of the *Colonial Policy of the British Empire*.

The recommendation of the commissioners was, however, adopted; and Lieutenant-colonel Gawler was appointed by the crown governor of South Australia; the resident commissioner, Mr. Fisher, was removed, and the duties of his office were entrusted to Colonel Gawler, who thus represented, in his own person, the interests of the crown and those of the South Australian commissioners: he assumed the duties of his office in the colony on 12th October, 1838. An act of the imperial legislature, (1 & 2 Vict., c. 60), passed 31st July, 1838, amended act 4 & 5 William IV., and empowered the commissioners, or their representative in the colony, with their consent, to borrow such sums from the land fund as might be necessary for the efficient government of South Australia.

The lords of her Majesty's treasury, on 9th November, 1838, issued minute instructions on the subject of expenditure. On 8th February, 1839, the resident commissioner, (Colonel Gawler), was allowed, on account of some additional charges, to increase his expenditure, altogether, to £16,500 per annum; and later in the year he was informed, that the commissioners would be ready to afford pecuniary aid, to any moderate extent, in erecting wharfs at Adelaide; and they approved of the erection of a government house and public offices, "the total cost of which was not to exceed the estimate of £25,162." It is asserted, that a "general authority" was also given to Colonel Gawler, as the resident commissioner, to deviate from his instructions under circumstances of indubitable necessity. The sales of land, up to this period, were not of such extent as to justify any extravagant hopes, or expenditure of money. The Australian commissioners stated, that the whole of the land sold from the commencement of their proceedings on 15th July, 1835, to 7th December, 1837, consisted of 64,358 acres, for which they received £43,221. The details were—437 land orders, each for 135 acres, included in the preliminary sales, = 58,995 acres, £35,397; one deposit forfeited, £20; 200 land orders, exclusive of the preliminary sales, each for 80 acres at 12*s.* per acre = 1,600 acres, £960; land orders at 20*s.* per acre = 3,200 acres, £3,200; investment for the purchase of land in the colony, £50; amount received by the commissioner in the colony for sale of town sections by auction, not included in the 437 preliminary orders, 563 acres, £3,594; total number of acres, 64,358; total amount of purchases, £43,221.

In 1838, the sales were stated to be—January, acres, 320; February, 400; March, 880; April, 1,200; May, 1,200; June, 5,920; July, 4,480; August, 4,640; September, 4,480 = 23,520 acres.

The state of the colony at this period may be judged of by the following extracts from the speech of the official gentleman who ruled the affairs of the province from the period of the departure of Captain Hindmarsh, to the arrival of Lieutenant-Colonel Gawler. The acting governor, Mr. Stephens, after stating to the council the difficulties to be encountered, said—"I have *first* to announce, with regret, that *there are no funds in the treasury;* and the quarter's salary due to the whole of the public servants on the 30th June last, (1838), is at this day unpaid. *Second*—by the departure of the marines in H.M.S. *Alligator*, this province, with a population exceeding 4,000 persons, is abandoned to the protection of eighteen policemen, lately embodied by governor Hindmarsh; and there are now twenty-one prisoners confined in the weather-boarded hut used as a gaol, and perhaps double that number of desperate runaway convicts in the neighbourhood of the town. *Third*—there are no funds for the support of the force now constituting our only protection. *Fourth*—the embarrassed state of the survey department, and the want of land."

On the arrival of Colonel Gawler, on 12th October, 1838, at Adelaide, he found all things in confusion;* "the public offices with scarcely a pretension to system; every man did as he would, and got on as he could; there were scarcely any records of past proceedings, of public accounts, or of issues of stores; the survey department reduced to the deputy surveyor-general (Colonel Light had resigned), one draughtsman, and one assistant-surveyor—its instruments, to a great extent, unserviceable, and its office with scarcely any maps of the country, and totally without system, records, or regulations; the colonial finances in a state of thorough confusion and defalcation; the population shut up in Adelaide, existing principally upon the unhealthy and uncertain profits of land jobbing; capital flowing out, for the necessaries of life, to Sydney and Van Diemen's Island, almost as fast as it was brought in by passengers from England; scarcely any *settlers* in the country; no tillage; very little sheep or cattle pasturing, and this only by a few enterprising individuals risking their chance as squatters."

These were herculean difficulties—quite enough to have occupied the energies of any governor, and to warn him against extravagant expenditure. Meanwhile the most strenuous efforts were made by the commissioners to raise money by the sale of land, and the real merits of South Australia magnified until the public were well-nigh led to consider it the only settlement worthy of being the residence of a free Englishman. Large quantities of land were soon sold in London, where speculation was rife, in "town lots and country sections." Up to August, 1839, there were sold 250,320 acres of land, which produced £229,756; and 7,412 persons had arrived at Adelaide: but many of the English purchasers who bought these lands have not received, to the present day, any returns for their outlay.

Instead of directing attention to the cultivation of the soil, and the real foundation of the colony, Colonel Gawler launched out into a most lavish expenditure in the erection of public buildings quite unnecessary in an infant settlement, and which kept large numbers of the labouring classes in Adelaide dependent on government works when they ought to have been clearing, ploughing, and cropping the land on their own account. By this means the price of labour became inordinately high, and speculations in town lots and buildings the principal occupations of the people. In 1839 there were only 2,500 acres of land under cultivation.

The colonial revenue was about £20,000 per annum, the expenditure at the rate of £150,000 per annum. In the *first* quarter of 1839 it was £8,950; in the *second* quarter, £16,000; in the last quarter of 1839, £34,000; and in the last quarter of 1840, £60,155. The extravagance of all parties in the colony is abundantly proved in the documents laid before parliament in 1843. Amongst the items in these papers is the charge made by a police constable at Port Lincoln of "ten shillings for two pounds of *wax* candles for *a prisoner* for six nights;" this was certified by the "resident magistrate," but the auditor subsequently remarked—"it is not usual to allow felons any light in their cells; they are locked up when darkness sets in, and certainly do not require *wax candles*."

Individuals holding official situations under the government were allowed to supply

* Despatch from Colonel Gawler to Lord Glenelg, her Majesty's secretary of state for the colonies, 23rd January, 1839.

stores for the service of the department in which they held office, and the bills for such stores were rendered and paid some months before an examination took place by an auditor; among other stores thus supplied without any written authority, and for no known object, I perceive in the list "three tins of wine biscuits, £6 6*s*.," about ten times their value; "£105 for ten casks of port wine," no statement of the number of gallons in each cask; "£4 10*s*. for six tins (of 4lbs. each) preserved meat," or 15*s*. a tin, the then usual shop price in Adelaide being 5*s*. To a bullock driver, 11*s*. 8*d*. a day, and £4 a week for the hire of his bullocks. Everything else was in an equally wasteful ratio. The annual government expenditure for the support of the different departments was about £94,000, exclusive of buildings, roads, printing, emigration, and other charges; to meet this heavy outlay the colonial revenue amounted at the utmost to £30,000 a year.

While the governor in his capacity as resident commissioner was thus drawing upon futurity, the land sales in England were falling off, and the commissioners were obliged to raise temporary loans for colonial purposes, borrowed from the emigration fund, which all persons purchasing land in the colony had been assured should be solely expended in conveying labour to South Australia. By August, 1840, the amount due to the emigration fund was upwards of £90,000, which was expected to be replaced by the end of the year. This however was rendered absolutely impossible by the rapidity with which Colonel Gawler's bills came pouring in. The South Australian commissioners were, in August, 1840, compelled to lay a statement of their difficulties before Lord John Russell, who determined on instituting a parliamentary inquiry into the financial state of the colony, pending which inquiry there was no alternative but to dishonour the bills drawn by Colonel Gawler on the commissioners; which was done accordingly, to the great damage of the colony and of its interests.

Colonel Gawler was advised by the South Australian commissioners that no further funds remained in their hands, upon receipt of which intelligence he publicly notified his intention of drawing upon the lords of the treasury in his capacity of governor, for the purpose of paying the current expenses of the government. Large debts were thus contracted to store-keepers and others for supplies.

On the 26th of December, 1840, her Majesty's government were compelled to recal Colonel Gawler from South Australia; the grounds assigned by Lord John Russell were "that he had drawn bills in excess of the authority received from the commissioners." Whether this were so, or whether he had, as he appeared to believe, almost a *carte blanche* from the commissioners, there could be no doubt of the necessity of his immediate recal from a position for which he had proved himself in an important respect so ill qualified. Mr. Dutton represents Colonel Gawler as possessed of many virtues, and distinguished in private life by high intellectual attainments. This is, I believe, perfectly true; the colonists entertained for the gallant officer, whose moral conduct and personal character are unquestionable, great respect; but her Majesty's government were not the less bound to remove him as an incapable financier.

It is the opinion of an intelligent gentleman—one of the first emigrants to South Australia—that many of the difficulties of the colony arose out of the unwarrantable interference of governor Hindmarsh with Colonel Light and the resident commissioner. He asks—"Of what use was it to proceed with the country surveys, when the colonists were led to believe that the site of the chief town or city selected by the surveyor-general would not be confirmed by the South Australian commissioners at home? Who would think of selecting or purchasing, and then locating on land, under such circumstances? The people were frightfully unnerved; this was the reason of the land not being tilled; the capitalist, the farmer, the emigrant remained in the town, squandering their money, and gambling in town allotments. Many of those people who, perhaps, held preliminary land orders, found, when the excitement subsided, and their land could be selected with safety, that their ready cash had vanished, and their land orders were mortgaged."

There is a great deal of just observation in these remarks; but they appear to me an effect, rather than a cause. The Imperial Legislature clogged the act of Parliament authorizing the formation of the colony with injudicious restrictions; compelled a large quantity of land to be sold, and considerable sums of money to be raised *before the act became operative*. Instead of encouraging any body of Englishmen who would colonize the wastes of South Australia, obstacles

were interposed in their attempts to accomplish this most desirable object, which was attended with many formidable difficulties. The proceedings of the South Australian commissioners added to the embarrassments created by the act of Parliament; and, indeed, in some respects, they were the inevitable result of a primary error. *Twenty*, or even *twelve* shillings an acre for land, of which the very locality was unknown, was a most injurious perversion of a sound principle of selling *surveyed* lands at a moderate fixed price. The appointment of conflicting authority in the persons of a governor and a resident commissioner, the unfortunate selections made in Captain Hindmarsh and in Colonel Gawler as governors, and the wasteful expenditure of the latter, produced a climax which undoubtedly caused great distress, but from which arose a sounder system, on which the existing prosperity of this fine colony now rests.

The position of affairs is shown in the debate on the South Australian bill in parliament, on the 15th of March, 1841, when Lord Stanley stated that the colony had commenced on the principle of loans, had continued on a system of credit, its prosperity had been fictitious, and now the bubble was burst, and the full mischief which had been created had been discovered. The noble lord added, "he did not wish to enter into details, but when they saw that at the expiration of four years from the commencement of a colony there was an expenditure of £140,000 per annum, the revenue of the colony not being more than £20,000; that the government-house had been built at an expense of £24,000 on sanctioned authority; that £22,000 had been laid out in the formation of a road across a swamp for the purpose of improving a harbour originally badly chosen; that lands bought for 12*s*. an acre were sold in the hardly created town of Adelaide for £500, £1,000, or £1,500 an acre (a price hardly obtainable in Liverpool itself for an acre); that there had been established three banks carrying on business and issuing their own paper; that labour had reached the price of from 6*s*. to 12*s*. per day; that a body of police was established, paid at the rate of £1 19*s*. per week each man, who complained of the inadequacy of their wages, because they were unable to procure their white trousers and gloves to be washed for it—what, he asked, was the consequence of all this?—that there were not 200 acres of land in the colony actually under tillage for the support of the colony, the whole of the colonists directed their attention to land-jobbing and speculation, and a profligate waste of money had taken place in a manner utterly inconsistent with the success of the colony."

Captain Grey, late of the 83rd regiment, was appointed to succeed Lieutenant-Colonel Gawler. This officer carried off high literary honours at the Military College of Sandhurst; in 1837–8–9, when a lieutenant, he voluntarily undertook, in company with Lieutenant Lushington, of the 9th regiment of infantry, an expedition of discovery to the west and north-west coasts of Australia (see page 379). The talent and judgment evinced by Lieutenant Grey in this arduous pursuit of knowledge, the local information which he possessed of South Australia, and the comprehensive mind which was evident in his language and writings, made a strong impression on Lord John Russell, then secretary of state for the colonies, and induced his lordship to recommend to the Queen for the government of South Australia, a gentleman who, whether a soldier, sailor, or civilian, was evidently adapted for the responsible duties entrusted to his care.

On 19th March, 1841, the house of Commons temporarily voted £155,000 towards the liquidation of the bills drawn on the South Australian commissioners by Lieutenant-Colonel Gawler, which the commissioners had no funds to meet. Governor Grey arrived at Adelaide in May, 1841; he found the balance in the hands of the colonial treasurer only £700, and the anticipated expenditure for the *quarter*, £32,000, and about £3,000 remaining due from last quarter. At the same time, £35,000 of claims left unsettled by Governor Gawler were clamorously pressed upon Governor Grey for liquidation. The sales of land had all but ceased, the revenue was decreasing, the colonial establishments were unnecessarily large, and there were little or no funds to carry on the government. The South Australian Bank offered Governor Grey a loan of £10,000, at twelve per cent., on his personal security; this he properly declined—the crown property in the colony he was authorised by her Majesty's ministers to sell, but the derangement in the money market caused by the proceedings of Lieutenant-Colonel Gawler, rendered such a measure impossible; no alternative remained, but to postpone any attempt at liquidating the bills of his predecessor, until the issue

of the pending parliamentary inquiry should be known. Retrenchment was everywhere begun—the government works which could not be left half-finished, without the risk of dilapidation, were completed so far only as was absolutely necessary; the labourers, who had for eighteen months been employed at high wages, were urged to betake themselves to agricultural labour in the country, or if they did not, Governor Grey treated them, to the number of nearly 2,000 men, women, and children, as mere pauper emigrants, but allowed none to want the necessaries of life; by this means, the energies of the people were directed from unprofitable buildings in town, to lucrative tillage and pastoral pursuits. A sum of £3,000 was obtained as a loan from the New South Wales government; the Lords of the Treasury defrayed the cost of completing the requisite work on the public buildings, the pauper emigrants, and the police establishment.

In July, 1841, Governor Grey met the Legislative Council with reduced estimates, as follows:—

Reductions in	1841.	1842.
Survey and Land Department	£14,850	£3,635
Emigration ,,	6,927	390
Storekeeper's ,,	23,748	340
Police, mounted and foot . .	16,109	9,112
Customs department . .	9,769	2,478
Harbour Master's ,,	3,944	1,612
Gaol ,,	2,141	1,034
Port Lincoln	1,299	572
Total	78,787	19,173

There were also various minor reductions, and several useless offices abolished. The wages given by government to the emigrants were reduced from 1*s.* 6*d.* a day, with rations, to 1*s.* 2*d.* without rations, and they were withdrawn from Adelaide, and employed in making bridges and in opening lines of communication, such as the *Great Eastern road,* to the valuable Mount Barker district.

Her Majesty's secretary of state for the colonies and the lords of the treasury effectively supported the measures of Governor Grey, and, in a despatch of their lordships to Lord Stanley, of 26th April, 1842, they stated that, "the governor had acquitted himself in an able and satisfactory manner, of the important trust which had been placed in him."

During the administration of Governor Gawler, everything had a fictitious value; a return to a sound state necessarily caused a rapid fall in the price of land and houses, and there were many bankruptcies. Nearly one-half the population of the province (8,500) had crowded into Adelaide, among whom had been spent, during the twelve months preceding the arrival of Governor Grey, about £150,000, which had been procured by drawing bills on the South Australian commissioners in England. This large sum was distributed in the form of salaries, allowances, and lucrative contracts. The whole population of South Australia was then less than 15,000 (14,061), who thus received, man, woman, and child, each £10. And although there was abundance of the richest land around ready for the plough, the immense sum of £277,000 was sent out of the colony during the year 1840, for the purchase of the necessaries of life.

The character of Governor Grey was manifested by the exercise of a wise statesmanship, and the firmness with which he resisted the clamorous demands made by tumultuous bodies of men using seditious language, and marching in organized array to government-house, threatening the representative of their sovereign, whom there was no military to protect. But these and other unjustifiable proceedings, did not prevent the governor contributing £400 in one year to charitable purposes, out of his limited income of £1,000; and to his honour it is recorded, that "real poverty and distressed merit never in vain sought relief."

In November, 1841, with a view to the relief of the colony, whose mercantile community was limited, Governor Grey drew upon the lords of the treasury for the amount of the bills which Colonel Gawler had drawn, but which were then dishonoured by their lordships. For this proceeding Governor Grey was slightly censured by the Secretary of State; in justification he alleged that Parliament had voted £155,000 to liquidate the dishonoured bills of Colonel Gawler.

Captain Frome, of the Royal Engineers, who had arrived in the colony with a small detachment of that excellent scientific corps, undertook to perform, gratuitously, the arduous duties of colonial engineer. Under the active superintendence of this able officer, the land surveys made rapid progress, and by the end of 1841, claimed special surveys of 4,000 acres each, to the number of thirty-five, were completed, and

306,000 acres were declared open for the selection of new immigrants. The cost of surveying was reduced from an almost unknown large sum, to $7\frac{1}{2}d.$ per acre.

The recommendations of the select committee of the house of Commons were not immediately carried out, owing to the change in the ministry; but on 5th July, 1842, Lord Stanley, her Majesty's secretary of state for the colonies, with his accustomed ability and clearness, laid fully before the legislature the state of South Australia, and of the liabilities incurred, which Mr. Dutton gives as follows:—

I. Parliamentary grant, advanced in 1841	£155,000
II. Bills of Lieutenant-Colonel Gawler remaining unpaid	27,290
III. Bills of Governor Grey, on account of emigrants maintained at the public expense	17,646
IV. Amount borrowed by South Australian Commissioners, bearing interest at 6 to 10 per cent. per annum .	85,800
V Outstanding debts of Lieutenant-Colonel Gawler's Government . . .	35,000
VI. Amount borrowed from Land and Emigration Fund	84,697
Total	£405,433

This was an unfortunate illustration of what was termed the "self-supporting system of colonization;" in about four years the colony had incurred debts to the amount of £400,000, irrespective of its land sales and local revenues. Lord Stanley proposed to settle the debt of South Australia, thus:—I. (£155,000) To be made a free grant by parliament; II. and III. to be paid by the British treasury; IV. to remain as bonds with the holders, at an interest of three and-a-half per cent. guaranteed by her Majesty's government, and for which provision would be made out of the consolidated fund; V. and VI., to be covered by debentures issued in South Australia bearing interest not exceeding five per cent. His lordship also proposed to insert a sum of £15,000 in the estimates, to aid in carrying on the local government in 1842. The resolutions of the noble lord were agreed to by a large majority, and an act "for the better government of the province of South Australia," was passed 15th July, 1842.

I cannot agree with Mr. Dutton, that Parliament could be expected to sanction the payment of the dishonoured drafts of Governor Gawler, or the renewed drafts of Governor Grey, and that no portion of them should have been entailed as a burden on the colony. The question was one which it was utterly impossible to solve to the satisfaction of all parties—for, whether the penalty of Colonel Gawler's grievous improvidence was to be paid by the ruin of the colony, or averted by a heavy sacrifice at home, it would in either case be borne by the innocent. Her Majesty's government, in agreeing to pay upwards of £250,000 out of the taxes raised from the people of England, towards a debt which, although incurred by their representative, holding under them authority whose measure, whatever it may have been, he doubtless greatly exceeded—certainly evinced no desire to shrink from the responsibility which they had incurred in sanctioning the unwise selection of the Australian commissioners. The money, it must be remembered, had been actually spent (though in a manner most lavish and ill-timed) *in and for* the colony, and the public buildings therewith constructed, would eventually benefit the South Australians. The dishonouring of the bills drawn by Governor Grey in payment of Lieutenant-Colonel Gawler's expenditure at Adelaide, necessarily increased the financial difficulties of the colonial government; Governor Grey was obliged to borrow £1,800 from the commissariat chest; during 1842, 136 writs were passed through the sheriff's court at Adelaide, thirty-seven fiats of insolvency were issued, and out of 1,915 houses built in Adelaide, 642 were found, in December, 1842, *totally deserted*, their inhabitants having proceeded into the country to labour in raising the means of subsistence from the fertile interior, where ploughs and harrows were in great demand.

At the beginning of 1843 every able-bodied man was at work on his own account; the harvest was so abundant, that there were not sufficient hands to reap it, and the soldiers and government *employés* were permitted to aid the farmers in securing the real wealth of the colony. The revenue began to improve; the exorbitant port dues which had been levied by Governor Grey to increase the "ways and means," were abolished, and the *post road* which had been constructed by the South Australian Company, at an expense of £13,400, under an agreement with Governor Gawler, that twelve per cent. interest was to be paid on the capital expended, by the colonial government, or that a toll might be levied, was compounded for by Governor Grey giving the company authority to select 12,000

acres of land out of the surveyed districts, in full of all claims on this account. The land sales were, however, checked partly by the distressed state of the colony, and partly by the operation of an act passed by the Imperial Legislature, 22nd June, 1842, "for regulating the sale of waste lands in the Australian colonies and New Zealand," which enacted that all lands should, in future, be disposed of by public auction at the minimum price of 20*s*. per acre, except blocks of 20,000 acres, of which the price should not exceed 20*s*. per acre. Under this act, *half* (not all) the proceeds of the land sales were to be applied to emigration purposes.

In 1843 the whole of the land sales in South Australia amounted to only 598 acres; the proceeds, to £613 13*s*. 9*d*., and but for a discovery then made, the colony would have had to maintain a long and difficult struggle against the enhanced price of land. Among the eighty-acre sections sold in 1843, there was one on the river Light which was found to contain rich copper ore; a discovery which led to further researches, and gave a stimulus to the enterprise and industry of the colonists, which has ever since continued, and has been the means of greatly enriching South Australia. The circumstances connected with this important epoch in the history of the province deserve detailed notice.

For several years after our occupation of the province of South Australia, no suspicion was entertained of the mineral riches to be found there, and the crown unreservedly granted, in fee simple, the ground and everything beneath it. Up to 1843, more than 300,000 acres of land had been surveyed and appropriated, and 300,000 more were surveyed and open to selection; but no one noticed the copper and lead which were nevertheless "cropping out" on the surface in so many places. During the latter part of the year 1842, a son of Captain Bagot, while gathering wild flowers in the plain, found and conveyed to his father a fine specimen of the green carbonate of copper. Fortunately for the colony, an intelligent settler named Dutton, to whose interesting work, entitled "*South Australia and its Mines*," I am materially indebted for details concerning its early history, had been educated at the institute of M. de Fellenberg, at Hofwyl, in Switzerland, where during the annual pedestrian tours of the pupils, he had acquired some knowledge of mineralogy. One day, when in search of one of his flocks of sheep which had dispersed during a thunder-storm, he ascended a hill to obtain a view of the surrounding country, and, if possible, find his sheep. Wet, weary, and cold, from having been out all day, he pulled up his horse beside a rock which, at first sight, he supposed to be covered with a beautiful green moss. The habit acquired in Switzerland, of examining any rocks or stones which presented a curious appearance, induced Mr. Dutton to dismount, when he found a large protruding mass of clay slate strongly tinged and impregnated with a mineral which he supposed must be copper, from the close resemblance of the colour to verdigris. Mr. Dutton being on intimate terms with Captain Bagot, communicated his discovery to him, and the value of the mineral found by the young florist on the plain, and by the sheep farmer on the adjacent hill (Kapunda), was soon ascertained.

Captain Bagot and Mr. Dutton kept their own counsel; got a section of eighty acres surveyed, which according to the then land regulations, was advertised for a month in the government gazette; they then became the fortunate purchasers, at the fixed government price of £1 per acre, although there were a number of "eighty-acre land orders" previously granted to individuals in the colony, who might have selected this section. What the marketable value of this tract may now be, it would be difficult to say; in April, 1845, Captain Bagot and Mr. Dutton bought another lot of 100 acres, adjoining their original purchase, which they found contained rich lodes of copper ore; but on this occasion, instead of buying the 100 acres for £100, it cost them, after a sharp contest by public auction, £2,120. The great value of the ores soon became known, and the eighty-acre section containing the Montacute copper mines, put up for auction by government at £80, sold for £1,550. The Kapunda copper ores taken from the surface were sent to England, and found to yield twenty-three per cent. Some Cornish miners pursuing quietly agricultural pursuits in the colony, were soon engaged by the proprietors; and a place which a very few years since was a perfect wilderness, is now a thriving township, affording profitable employment to a considerable population.

The attention of all classes was now directed to geological and mineralogical know-

ledge; but the overseers, herdsmen, and shepherds, who frequently could not find anything but a piece of metallic ore to throw at a stray beast, were the principal discoverers of the valuable minerals which lay everywhere exposed to the most ordinary observation.

The *Montacute* copper mine, distant ten miles from Adelaide, was discovered by Mr. Andrew Henderson, overseer to Mr. Fortnum, while in search of a lost bullock. Mr. Henderson, when ascending a spur of the Mount Lofty range, remarked the green colour of a perpendicular cliff, broke off a piece, and conveyed it to Mr. Fortnum, who, from his chemical and mineralogical knowledge, instantly recognised the specimen as a rich copper ore.

Messrs. Fortnum and Henderson did not keep their secret; and when the government had surveyed the eighty acres required, and the section was brought to sale (16th February, 1844,) under Lord Stanley's regulations, instead of £80, the purchasers had to pay £1,500. In a few hours after the sale, however, they sold thirty hundredth parts for the cost of the whole, in £50 shares, to a mining company.

Mr. G. F. Angas has also had the good fortune (which he richly deserved, for his unceasing efforts to benefit South Australia,) to discover valuable mineral treasures in his extensive property, and has leased the mines on advantageous terms to mining associations.

Furnaces for smelting the ores of copper and lead, and refineries for separating silver from the argentiferous ores, have been erected near the different mines; and works which will cost £70,000 are now in course of construction near the Burra-Burra mines. Copper and lead ores will be smelted on the spot, rolled, and shipped direct to the available markets of India and China.

In consequence of the mineral riches contained in the province, the sale of land, which in 1843 was at a very low ebb, has since that date considerably increased. Two special surveys, of 20,000 acres each, have been demanded, and the purchasers paid £40,000 for the same. The Kapunda mining land yielded £3,008; the Montacute, £1,550. The Burra-Burra territory cost the original proprietors £11,000. The total amount paid for mineral lands, from 1843 to 1847, was about £70,000. A sale of the crown lands surrounding the Kapunda mine, realized for the first section of eighty acres £7,100, or about £90 an acre; another section brought £80; others, £20 to £30; the total (2,804 acres) yielded £30,081.

But these proceedings were not mere wild speculations. Messrs. Bagot and Dutton, who bought the first eighty-acre mineral section (copper) at Kapunda, for £80, subsequently refused, in London, £27,000 for their land; and they have from the commencement worked entirely on the ores, without risk, and without the advance of a shilling being required from the proprietors. The first lead ore sent (in 1841) from Adelaide to England sold for twelve guineas a ton. The different ores raised in South Australia probably exceed in value one million sterling; and the amount is annually increasing. Agricultural as well as pastoral pursuits have not been neglected; but have flourished, by means of the wealth derived from the mines.

The subsequent chapters will show the progress of the colony, when the revenue began to exceed the expenditure, and the exports the imports; the extension of cultivation; and the augmentation of wealth.

Governor Grey remained long enough at Adelaide to witness a pleasing change in the feelings and language of the inhabitants towards him; and when, in 1845, her Majesty's government resolved to confide the administration of affairs in New Zealand to his proved judgment, his excellency quitted the scene of his difficulties, and of his triumphs, with the esteem and heartfelt gratitude of those he had so efficiently governed.

The task of his successors has been comparatively an easy one. Governor Grey was succeeded, in 1845, by Major Holt Robe, of her Majesty's 87th regiment, late military secretary at Gibraltar; and Major Robe, in 1848, by Sir H. E. F. Young, who filled with credit to himself for several years the post of secretary to the government of British Guyana, was next appointed lieutenant-governor of Eastern Africa, from whence he was removed to the responsible position of lieutenant-governor of South Australia, which station he now occupies.

The facts contained in the previous pages go far to show that South Australia cannot fairly be quoted as an argument either for or against the system adopted in its formation; since the leading causes both of its past disastrous and present successful state, viz., the improvidence of Colonel Gawler, and the discovery of its readily available mineral stores, were equally unforeseen by the founders of the colony.

CHAPTER II.

POSITION, AREA, PHYSICAL FEATURES—COAST LINE—HARBOURS, MOUNTAINS, RIVERS, AND LAKES—GEOLOGY, MINERALOGY, AND SOIL—CLIMATE AND SALUBRITY.

The province of South Australia is situated between 132° and 141° E. long., and extends from the sea coast on the south, inland, to the twenty-sixth parallel of latitude. The area comprised within these limits is estimated at 300,000 square miles, or 192,000,000 acres, being more than double the dimensions of the British isles. Of this extensive territory, the greater part is, if not totally unexplored, at least very imperfectly known. According to a recent local authority, the only portions which have as yet been examined are, the peninsula formed by St. Vincent's gulf, on the west, and Lake Victoria or Alexandrina and the Murray, on the east; the western boundary extending from Cape Jervis to the great bend of the Murray, in 34° S. lat.; Yorke peninsula, between the Gulfs of Spencer and St. Vincent, and the peninsula of Eyria, the boundaries of which extend from Sleaford bay, in a northern and eastern direction as far as the head of Spencer's gulf, and in a northern and western direction as far as Streaky bay; the latter of these tracts have been, however, but very imperfectly examined.

South Australia, though it has not the grandeur imparted to the adjacent colony of Port Phillip, by the lofty summits of the Australian Alps, possesses, nevertheless, much picturesque scenery; and its only serious defect, the want of navigable rivers, is in great measure remedied by the accessible nature of the country.

Coast Line.—The sea-board of this province, roughly estimated at about 1,500 miles, trends in a general south-east direction from the 132nd meridian, which falls on the coast a little to the westward of Cape Adieu, to the 141st meridian, a short distance eastward of Cape Northumberland, and is, throughout its whole length, indented with numerous deep and extensive bays, (besides the two great Gulfs of Spencer and St. Vincent), which though as yet very imperfectly known, are supposed to be, with few exceptions, the resort of the whale during the rainy season. Like most of the sea-coasts of this hemisphere, that of South Australia is bordered by many small islands, few of which are of any considerable size, Kangaroo island being the chief exception, and rocks, reefs, and shoals, frequently render the entrances to the inlets intricate or dangerous, to a great extent neutralizing the advantages presented by the indentations of the coast, whose leading features we now proceed to notice.

Tracing the sea-line in the direction in which we have before stated that it trends, the first haven met with is *Fowler's Bay*, which, though it affords but indifferent shelter, is valuable from being the only harbour for several hundred miles; the dangerous nature of the shores to the east of the province being rendered yet more hazardous, by the strong current which sets into the Great Australian Bight. The anchorage is good, and although it is open to three points of the compass, it is evident, from plants growing close to the water-side, that a swell capable of injuring a vessel at anchor is seldom, if ever, thrown into it. Between Fowler's bay and Point Bell, the coast is moderately elevated, but barren and sandy; it is broken into three sandy bights, separated from each other by rocky projections.

Nuyt's Archipelago is situated in the extensive curve of the main coast between Points Bell and Westall, which comprehends several deep bays. The principal islands of this Archipelago are those of St. Peter and St. Francis, of the former, the most considerable, is low and sandy, about six miles in length and three or four broad. On it is a well dug by a sealer, who lived there many months. The shore abreast of it is of the same character, and connected with it by a shoal and some dry rocks, whence the shore trends round to the north and west, towards *Point Peter*, and forms—

Denial Bay, a good harbour, said to afford great facilities for whale fishing. Round the north side of Point Peter is a small boat harbour, with four fathoms at its entrance; but this depth rapidly decreases, and the creek terminates in an extensive morass.

The Isles of St. Francis are eleven in

number, they compose the south-western-most group of Nuyt's Archipelago; but one only of them, situated in the middle of the cluster, is of any considerable size; it bears the name of the whole. *Isle St. Francis* is about three miles in length, and about half-a-mile across, near the middle, which is a sandy isthmus, connecting the moderately high and cliffy extremes, whose breadth is from one-and-a-half to two miles. The dark brown birds called sooty petrels, abound here, and a large bird called the barnacle goose, occasionally frequents the island.

Smoky Bay is six or seven leagues across, but very shoal and dangerous of entrance, being much exposed to the south and west. *Point Brown*, its eastern extremity, is a low sandy projection, in 32° 37′ S. lat., 138° 48′ E. long., between which and *Cape Bauer* a cliffy headland, extending four or five miles into the sea, is the low sandy shore of *Streaky Bay*, a beautiful and extensive harbour, which obtained its name from its inner portion being filled with light-coloured, streaky water, bearing on its surface much refuse from the shore, and sea-weed. Whales are very numerous in this bay, and oysters are procured here in immense numbers, and of excellent flavour. At the distance of four or five miles from Cape Bauer lies *Olive's Isle*, the south-east of Nuyt's Archipelago; it is low, about three miles in circumference, and surrounded by breakers.

Point Westall is somewhat higher than Cape Bauer; the space between them is occupied by a bight, skirted by a sandy beach, and open to the westward, which received from the French, who, it will be remembered, explored about 100 miles of this coast, the name of *Corvisart Bay*.

Cape Radstock, a bold projection, in 32° 12′ S. lat., 134° 15′ E. long., forms the southern extremity of a range of limestone cliffs, that line the shore for about six miles to the north-west; from thence to Point Weyland a large body of water runs parallel to the coast, having an entrance at both points.

The *Investigator's Isles* lie off this portion of the sea line. *Flinders' Island*, the largest and most central, is in shape nearly a square, each side of which is from three to five miles in length, with rocks projecting from the intermediate points. Bights are formed on the four sides; but the northernmost alone appeared to afford good anchorage. The island, according to Captain Lee, is covered with wood, possesses plenty of fresh water, and is admirably adapted for a whaling station. Flinders, who discovered it, gives a different and almost contradictory account of its capabilities; for he states that no fresh water could be found, nor could firewood, even of very small size, be procured without difficulty; yet it was frequented by hair seals, sooty petrels, and small kangaroos; and at a former season, probably during the spring, had been visited by geese.

Waldegrave Isle, the most easterly of Investigator's group, lies close to the main land. *Anxious Bay* is situated between it and *Cape Radstock*.

Proceeding in a south-easterly direction, the next feature worth noticing is *Coffin Bay*, a whaling station of some importance. It is rather an inlet than a bay, and stretches so far into the land as to approach within sixteen miles of *Boston Bay*, which lies nearly opposite to it, on the eastern side of Flinders Peninsula. It is seven or eight miles across, and is well sheltered from all winds, save from north to east; but, unfortunately, a great portion of it is rendered useless by the shallowness of the water. The inner portion of the bay, however, is said to contain two or three secure harbours, with excellent anchorage. About two miles distant from the sandy east shore of Coffin Bay is *Mount Greenly*, a well-wooded hill, which rises between 600 and 800 feet above the level of the sea, and is remarkable as being the first elevation of any importance marking the difficult and dangerous coast we have just been tracing. Mr. Cannan, who examined the coast, in 1840, as far as Fowler's Bay, says that there is no "rise that can be called a hill from Mount Barren to Mount Greenly," and speaks of the eternal limestone cliffs, and the scarcity of water and grass, along these shores.

To return, *Fowler's Bay* is sheltered on the south and west by a barren and sandy tongue of land, whose northern extremity is named *Point Sir Isaac* (in honour of Sir Isaac Coffin), and the western, *Point Whidbey*. To the east of the latter lies *Avoid Bay*, a large ill-sheltered inlet.

Point Avoid, the south-east head of Avoid bay, is low, and has two small rocky islets connected with it by a reef lying off from it to the extent of nearly three miles. These are the easternmost of *Whidbey's Isles*, which extend in a line nearly five leagues from Point Avoid, and are small but considerably elevated; the westernmost of the group is a cluster of small rocky lumps called the Four Hummocks.

Perforated Isle, the largest and nearly the central of Whidbey's group, is about a mile in length, and near its summit has an excavation through which the light is admitted on both sides. *Granby's Isles*, three small high islands, with a peak on the easternmost or largest, said to be visible ten leagues off in clear weather, lie fourteen or fifteen miles off Point Whidbey.

Cape Wiles is a steep cliffy head in 34° 57′ S. lat., 135° 38′ 30″ E. long., with two high rocks and a lower one near it. *Liguanea Island* lies about three miles from the shore, is of moderate elevation, and about a mile and-a-half in length.

Sleaford Bay is seven or eight miles across, and about four in depth, but being quite unsheltered from the southerly swell that rolls in so frequently upon this part of the coast, is of comparatively little value. It is occasionally used as a whaling station. *Sleaford Mere* is a shallow lagoon about four miles long and one broad, situated two or three hundred yards from the sea beach of Sleaford Bay.

Cape Catastrophe, so called from a boat's crew belonging to H.M.S. *Investigator*, whose names were afterwards given by Flinders to the islands in Thorny Passage, having been lost in the strong tide ripplings of this shore, marks the western side of the entrance to *Spencer's Gulf*. It has a round smooth summit, clothed with vegetation; three miles to the south of it lies *Williams Isle*.

We have now arrived at the deep gulf, which stretches into the land for nearly 300 miles, extending to 32° 30′ S. lat. It becomes quite narrow and shallow at the top, and appears at one time to have communicated with Lake Torrens. The extreme saltness of its waters throughout renders it only too probable that no fresh water stream of any importance disembogues within its limits.

The entrance of Spencer's Gulf is about fifty-five miles across, several islands are situated in it, of which, by far the most important, *Thistle Island** is about twelve miles in length, and from half-a-mile to two miles broad, affording good pasture for sheep.

* No fresh water could be found on this island by Captain Flinders, who explored it in 1802; he states that he found seals upon the beach, and further on numberless traces of the kangaroo. Signs of extinguished fire existed everywhere; but they bespoke a conflagration of the woods of remote date, rather than the habitual presence of men, and might have arisen from lightning, or from the friction of two trees in a strong wind. On their way up the hills a speckled yellow snake was met with asleep, measuring seven feet nine inches, and on his return a white eagle, with fierce aspect, and outstretched wings, bounded towards them, but stopping short at twenty yards off, flew up into a tree. Another eagle discovered himself by making a motion to pounce upon them, evidently mistaking them for kangaroos. These birds sit watching in the trees, and should a kangaroo come out to feed in the day time, it is seized and torn to pieces.—*Flinders' Terra Australis.*

Gambier Isles lie to the south-east of Thistle Island; the chief of them, Wedge Island, is so called from its wedge-like form. *Neptune Isles* are low, rocky, and surrounded by breakers.

Thorny Passage, formed between Thistle Island and the main, is from four to six miles wide. It obtained its name from the numerous small islands which contract its southern entrance so materially as to leave only about a mile-and-a-half of its breadth safe for ships, the depth there being twenty and twenty-two fathoms.

From Cape Catastrophe the shore of the gulf trends to the north, till on rounding *Cape Donnington*, in 34° 44′ S. lat., 135° 57′ E. long., the north harbour of *Port Lincoln* opens to view, with its three branches—*Spalding Cove*, *Port Lincoln proper*, and *Boston Bay*. This magnificent haven, from its great extent, and the number of its secure and sheltered anchorages, is capable of containing the largest fleets, and as a depôt can scarcely be surpassed by any port in the world. It is said strongly to resemble that of Rio Janeiro. The first object that strikes the eye is Stanford hill, on the summit of which is a white obelisk, erected to the memory of Flinders by Lady Franklin, marking the spot whence that celebrated navigator first beheld Spencer's gulf. At the entrance of Boston bay is Boston island, a hilly and romantic-looking spot, scattered here and there with casuarina trees, and clumps of various shrubs, and its shores indented by a succession of deep bays. It is uninhabited: only the solitary grave of an emigrant occupies a glen on that side of the island which looks towards the settlement from across the bay.† The anchorage in Boston bay is considered even safer and more accessible than that of Port Lincoln proper. The two channels of entrance into the bay, round the island, are practicable for vessels of the largest size, with any wind, or in any weather; for the harbour is so sheltered by the headlands forming the entrance, that the swell of the sea is broken before reaching it. The high ground which

† *Savage Life*, by G. F. Angas.

almost surrounds Boston bay, protects it in like manner from the winds, more especially those from the west and south-west, in which directions some of the hills attain the height of several hundred feet. The depth of water in the central parts of the bay is about twelve fathoms, varying from five to seven, at the distance of less than a quarter of a mile from the shore all round; whilst at Boston point, where the town has been laid out, there is a depth of two, three, and four fathoms, at about a boat's length from the land. The bottom consists, in some places, of mud, in others, of shells and sand. The tide sometimes rises seven feet, but usually not more than five; this depends, however, on the outward state of the gulf, and the quarter from whence the wind is blowing. In the summer season, the land and sea breezes blow very regularly for three weeks or a month at a time. They are then succeeded by strong winds from the south-west, that last for three or four days, and are sometimes very violent. In winter, these interruptions to the usual calm state of the weather are more frequent, but the harbour is little influenced by them. (See Captain Sturt's *Account of South Australia in* 1847.) To the east and north-east of Port Lincoln are scattered numerous islands, known as Sir Joseph Banks' group, whose names and positions are sufficiently indicated on the map.

Our information respecting the shores of Spencer's gulf is too fragmentary to afford materials for any connected account. From Port Lincoln to Franklin harbour a succession of rocky bays occur, many of them with fine sandy beaches, and shelter for small craft. Short reefs run out from all their points; but outside of these, and generally between them, the water is deep, and apparently clear of dangers.

Franklin Harbour affords good and well-sheltered anchorage; it is the port at the entrance of *Lake Flinders*, a sheet of water eight miles in length, by two in breadth, the greater part being, however, very shallow, and surrounded by mangrove swamps. In 1846, the head of the gulf was examined by the lieutenant-governor, Colonel Robe, for the purpose of ascertaining an eligible place of shipment for the produce of the northernmost located part of the province. The chief result of his expedition was the discovery that that portion of the gulf there, about ten miles across, extending immediately north from *Point Lowly*, in 32° 57′ S. lat., to the latitude of Mount Remarkable, 32° 43′, contains a commodious harbour, well sheltered, and of easy access. A long sand spit, stretching from the point (not named) of the eastern coast, opposite to Point Lowly, dry at low water, shelters the anchorage from southerly winds.

Port Germein, situated about twelve miles south-east by east from Point Lowly, affords good shelter for small craft. The port is bordered by mangrove swamps. A sandstone hillock, called Benjamin's hill, marks the north-east side of the entrance, whilst at the south-west entrance is a low mangrove point, off which a broad sand-shoal extends for many miles into the gulf.

The eastern shores of Spencer's gulf, formed by *Yorke Peninsula*, are marked by *Port Victoria*, situated at the spot termed by Flinders Point Pearce, now occasionally called Wardong Island, in whose neighbourhood there are stated to be several safe and commodious anchorages: further to the south, and nearly opposite to Port Lincoln, is an extensive and well-sheltered inlet, called *Hardwicke Bay*. *Cape Spencer*, the extremity of Yorke peninsula, is in 35° 17′ S. lat., 136° 52′ E. long.; off it lies *Althorpe Island*, a rocky islet, frequented by innumerable sea-fowl, in Investigator's Strait.

The *Gulf of St. Vincent* is about half the size of Spencer's gulf, which it resembles in the swampy nature of the shallow water at the top, and the perfect saltness of the water where both shores unite. Kangaroo Island, which lies across its entrance, effectually protects it from the swell of the heavy southerly seas, and forms two wide and safe passages, the western being known as Investigator's Strait, the eastern as Backstairs Passage. The navigation of the gulf itself is throughout easy and perfectly free from hidden dangers. In Investigator's strait, on the southern coast of Yorke Peninsula, nearly midway between Cape Spencer and Troubridge Shoal, is an extensive bay, called *Sturt Bay*, which affords good and safe anchorage, for although open to the south and south-east, winds from these quarters, owing to the narrowness of the strait, do not raise a sea sufficient to impede a vessel in weighing anchor. The western shore of the bay is formed by a promontory of sand hills (from forty to fifty feet in height), clothed with grass and casuarina trees, terminating in *Point Davenport*, a flat rocky point which forms an effectual breakwater during south-west gales.

On the eastern coast of Yorke Peninsula, *i. e.* the western shore of St. Vincent's gulf, nearly opposite to Adelaide, is a good harbour, called *Port Vincent*. Between the head of St. Vincent's gulf, in about 34° 30′ S. lat., and Port Adelaide, its eastern shore is alternately lined with mangroves, or low and sandy, affording nevertheless several commodious havens for small craft. The most important of these is *Port Gawler*, an inlet or channel surrounded on either side by mangrove swamps, by which the little river Gawler enters the gulf. The next important inlet is that which contains *Torrens Island*, and terminates in the large creek on whose eastern bank Port Adelaide* is situated. From thence to Holdfast bay, which lies about fourteen miles to the southward, a sandy beach continues backed by sand hummocks, that conceal the nearer country, but are not high enough to impede the view of the summits of the Mount Lofty range, distant about eleven or twelve miles.

Holdfast Bay, behind which is the fertile and beautiful tract called Glenelg Plains, is not very appropriately named, being in fact an open roadstead, exposed to north-west, west, and south-west winds, which, when blowing hard, raise a short tumbling sea. The ground is a fine sand, almost covered with weeds, so that when the anchor once starts, the weeds being raked up under the crown, will in a great measure prevent its again holding. In the summer months it may be considered a perfectly safe anchorage, if due caution is exercised in giving the vessel cable in time.† About the middle of the bay is an inlet of the sea, on which boats can enter and discharge their cargoes at high water, but at low water they are obliged to unload on the beach, owing to a bar of sand at the entrance. The southern arm of the bay is formed by the termination of the range of hills running from the north. A few miles from this bay the coast becomes bold and rugged, and, excepting one small sandy bay, into which a fresh-water stream oozes, continues so to the outlet of the *Onkaparinga*, the largest river on this side the gulf. There is a bar at its entrance, over which boats can only pass at high water, and it is salt as far as the tide flows, about three miles. There is no anchorage at this part of the coast.

Noarlunga township is situated near the mouth of the Onkaparinga, to the southward of which is a remarkable detached rock of a tabular form. Near this point some extensive gravel pits, with deep chasms and gullies, are very conspicuous; from these a gentle slope of nearly a mile runs along the coast into the plains, with an extensive beach of sand and shingle, forming a very narrow bay, called by Colonel Light *Deception Bay*. The scenery now becomes exceedingly diversified, dark cliffs and small sandy bays, with grassy slopes, almost to the water's edge, succeed each other, backed by moderate hills, sparingly covered with trees, and broken into numerous valleys. Thus passing *Aldinga Bay*, the outlets of several small streams, *Yankallilla Bay* and river, we arrive at a deep bay, protected on all sides by rocky mountains, and backed by a beautiful little valley surrounded by an amphitheatre of hills, richly covered with kangaroo grass, from which descends a small fresh-water stream, flowing through the valley between high banks, and abounding with fish. The hills here do not run in one continuous longitudinal range, as higher up the gulf, but to Cape Jervis, seven or eight miles southward, are thrown together as it were without any arrangement. They are covered, however, with good soil, are in many places well wooded, and enclose fertile valleys and rich openings, with numerous small streams. A rocky point, called by Captain Flinders, North-west High Bluff, forms the northern extremity of "Pat Bungar," a small but secure boat harbour, surrounded on all sides by low sloping hills. In the vicinity of *Rapid Bay* the cliffs in many places rise perpendicularly to a considerable height, and are veined with micaceous schist, or mica slate, with occasional veins of dolomite and other minerals. Copper ore has been found here. A few miles beyond is *Cape Jervis*, the projection which marks the eastern entrance to the gulf, whose shores (with the assistance of several authorities, but especially of the recent volumes of Sturt and Angas) we have now traced to their termination.

Kangaroo Island lies twelve miles south of Cape Jervis. Its length and area are differently estimated; but it is generally stated to be about seventy-eight miles, and thirty in breadth, with a superficies of 2,500,000 acres. The principal features of the land, as seen from the western coast, are swelling rounded hills, clothed with thick scrub, intermingled

* For description of Port Adelaide, see city of Adelaide, in a subsequent page.

† *Sailing Instructions for South Australia*, by Captain Lee.

with clumps of trees. Cliffs of a whitish colour, rising abruptly from the sea, attain in some places a height of 300 feet. Many romantic and sandy bays indent the southern coast, a long line of bold cliffs and rocky shores mark the north-western boundary. This extensive island is supposed by Mr. Menge to have been formerly connected with the mainland at Cape Jervis, and to have been separated by the ceaseless operation of the sea, which opinion is confirmed by the continuation of the mica slate formation all along its southern coast. Kangaroo island appears not long ago to have consisted of two islands, since joined by an accumulation of sand and lime at Lagoon bay. Limestone is continually accumulating around the coasts, and rests upon the primitive slate. This limestone contains, in a petrified state, the shells thrown out by the sea, and stumps of the indigenous woods, with their roots also petrified. Nine miles in the interior there are belts of iron and limestone running through the island, between which good arable soil is occasionally found.

The denseness of the vegetation prevents an accurate knowledge of the interior; it is supposed that considerably more than three-fourths of the surface is covered with brush-wood and dwarf gum trees; there is, however, large timber. Mr. W. H. Leigh measured one tree growing in the interior, and found it nineteen feet in girth, as high as he could reach, enormously lofty and umbrageous, and with others growing around it, as in an English wood; the minor plants and climbers which spring up at the roots of the forest timber, render exploration difficult, if not impossible. In several instances, where the land has been cleared, it has, however, yielded good returns, and quantities of the finest onions and other produce are now sent from Kingscote to Adelaide. The scarcity of good water, and the great difficulty of obtaining it, appears to be general throughout the island. The valleys running out to the north coast are filled with high timber, but there are some tracts of excellent soil along the table-land and in the drainages. Grass, however, is said to be scarce.

A chain of large lagoons extends from the head of Seal Bay over to Vivonne Bay; and from the Table Hill, twelve have been numbered, which, however, are mostly dry in summer.

Nepean Bay, on the north-east coast, in 35° 33′ S., 137° 41′ E., the chief feature of the island, is a large and excellent harbour, protected by a long sand-spit, which forms a perfect breakwater. The first colonists for South Australia landed at Nepean bay, and formed a settlement called *Kingscote*, on the slope of some hills overlooking the harbour. The soil was found to be poor, being composed of sand left by the retiring sea, and a small portion of vegetable mould. After considerable expense had been incurred by the South Australian Company, in erecting buildings and making roads, the settlers removed to the mainland. The climate is neither so warm in summer nor so cold in winter, as at Adelaide; but the gales of wind are heavier, and there is less rain, in general, than falls on the adjacent coast.

The island derives its name from the number of kangaroos seen by its discoverer, Flinders, who with his party, in a single day, killed thirty-one animals, the least weighing 69 lbs., and the largest, 105 lbs.; they were so unaccustomed to the sight of men, whom, says Flinders, they probably mistook for seals, that in some cases they allowed themselves to be knocked on the head with sticks. The kangaroo and the seal seemed to dwell amicably together among the bushes on the grassy flats near the shores of the island. Mr. Leigh was informed by a deserter from a ship, who had been on the island twenty years, that so numerous were the kangaroos at the period of his arrival, that himself and another deserter, with the aid of two dogs, killed 800 of these beautiful animals in one month. This wanton slaughter took place for the sake of their skins, which the deserters sold to the crews of vessels calling at the island for salt and seals. It is no wonder that this singular animal is now scarce on Kangaroo island. The wallaby, opossum, bandicoot, and guana, abound, and venomous snakes, four to six feet long, may be seen winding in all directions through the matted scrub; the common brown Norway rat overruns the island, as does also the wild cat. The lagoons contain numerous pelicans, and the poem of the "Pelican Island," is stated to have originated in its author reading Flinders' description of Pelican lagoon, near Nepean bay. Kangaroo island has been, for many years, the resort of runaway men from the whaling ships, and of various whalers and sealers, who lived a lawless life, and made occasional forays to the mainland, where

they kidnapped the native women, and conveyed them to their island homes. One European lived twenty-two years near Nepean bay, somewhat after the manner of Robinson Crusoe. His native wife killed the last emu on the island, some years before the arrival of the South Australian Company's settlers, in 1836. No inconsiderable traffic was carried on by these lawless wanderers, in skins of seal, wallaby, and peltry of different kinds, and in supplying ships with fine salt, which is obtainable in unlimited quantities from the lagoons, where the crystals are deposited by the solar evaporation of the sea-water.

The good houses which were built at Kingscote are falling to decay, since the abandonment of the island by their proprietors, the South Australian Company; but as the harbour is unquestionably excellent, and the site of the town pretty, it may, probably, eventually form an agreeable summer watering-place for the citizens of Adelaide, who desire change of air and sea-bathing.

The harbour, however, of American river, and also a small bay five miles to the south-east of it, are considered by some persons to present superior advantages for a seaport town, there being an abundance of water at both these places, of which there is a deficiency at Nepean bay,* and as good, if not better soil.

To return to the coast line of the mainland, which from Cape Jervis trends in an easterly direction, forming the northern shore of *Backstairs Passage,* (in whose entrance lie three rocky islands, called the *Pages,*) and is marked by a line of hills, diminishing gradually towards *Encounter Bay,* the principal scene of the shore whale fishery of South Australia. To this locality a degree of painful interest is attached from the dreadful disasters of which it has been the scene. The shore abounds in rocks and reefs, and the surf is represented by old captains as being worse than that at the Madras roads. The rollers rise to the height of fifteen or eighteen feet in one unbroken line as far as the eye can see, and as south winds prevail on this part of the Australian coast, it is only during the summer season, and after several days of northerly winds, that the sea subsides, and the roar of breakers moderates for a time. *Rosetta Head,* a lofty bluff, stretching out to seaward nearly at a right angle with the coast, forms the western side of Encounter bay. From its summit the whalers watch for their prey. Under the lea of Rosetta head is a small harbour also called *Rosetta,*† in honour of Mrs. Angas, which is separated by a rocky island named *Granite Island,* and a reef that is visible at low water, and connects Granite island with the mainland from Victor harbour. According to Captain Sturt, neither of these harbours are considered secure, although protected from all but south-east winds; and he mentions, on the authority of an experienced seaman, (whose name is not given) that under the lee of Freeman's Nob, and a small island off it, anchorage altogether preferable is to be found, as being more sheltered and having better holding ground. The capabilities of these harbours are however at present of comparatively little importance, but the rapid increase of colonization will probably soon render them of more immediate interest, and lead to their fuller examination.

* Mr. Robert Fisher, Dr. Slater, Mr. Osborne, and three other gentlemen, landed from the barque *Africaine,* Captain Duff, November 1st, 1836, near Morel's boat-harbour, between Capes Borda and Forbin, to travel overland to Nepean bay, whither the vessel in which they were passengers was bound, with emigrants to establish the colony of South Australia. The party were furnished with about two days' provisions, and six bottles of rum. They found the sun oppressively hot, the country hilly, and covered with dense prickly shrub, to penetrate which was very difficult; indeed they frequently had to chop their way through by means of a hatchet, which they fortunately had with them. The first three days of their travels they found fresh water plentiful, but after that time it was not obtainable. After nine days' perilous journeying and extreme hardships (for six days without water or food, except the flesh of half a dozen parroquets and the blood of a couple of sea gulls, shot during their excursion), Mr. Fisher, and three of his companions, reached the South Australian Company's settlement, at Port Nepean; Dr. Slater and Mr. Osborne were unavoidably left behind, and both must have perished, as a party of native women and islanders sent in search of them were out sixteen days, but returned without succeeding in the object of their mission.

† It was in Rosetta harbour, during the early settlement of the colony, that the South Australian Company's ship, *South Australian,* was driven on shore and lost. The *John Pirie,* a strongly-built schooner, also belonging to the company, had well-nigh shared her fate. This little vessel was lying astern of the *Australian,* when she went ashore, with the reef close astern of her. In this fearful position her anchors began to drag, and her destruction appeared inevitable, when her commander, Captain Martin, determined on attempting to take her over the reef, it being high-water at the time. He accordingly cut his cable, set his sails, and ran his vessel on the rocks. Four times she struck, and was heaved as often over them, until at length she floated in the deeper water of Victor harbour, and found her safety under the lee of the very danger from which she had expected destruction.

At the eastern extremity of Encounter bay the junction of the Murray with the Southern Ocean takes place in 35° 32′ S. lat., 138° 56′ E. long. The aperture made by the impetuous stream in the dreary line of sand hills through which it forces its way is about a third of a mile in breadth, and when the river is flooded a strong current runs out of it with such rapidity, that the tide setting in at the same time, causes a short and bubbling sea. On its eastern side is a lake or lagoon called the *Goolwa*, (chiefly occupied by Hindmarsh island) which receives the waters of Finniss river and Currency creek. Lake Victoria is connected with Encounter bay by means of the channel of the Goolwa, now called *Port Pullen*, in compliment to the officer who by strenuous and persevering effort, succeeded in taking a small cutter through that narrow passage, and navigating her across Lake Victoria into the Murray river, as high as the settlement of Moorundi. Although the name of Port Pullen records a daring and successful enterprise, yet many melancholy associations are connected with this spot. Some years before, Sir John Jeffcott, the first judge of South Australia, and Captain Blenkinsopp, with two of their boat's crew, found a watery grave in attempting to pass from the Goolwa into Encounter bay, and the large sand hill which marks the eastern shore, is named *Barker's Knoll*, in memory of the brave officer, who after having left his companions and succeeded in swimming across the mouth of the Murray, there fell a victim to the superstitious fears of the Milmendura natives.

Lake Victoria (originally called Alexandrina), is estimated at from fifty to sixty miles in length, and from thirty to forty in breadth. At seven miles from the entrance of the Murray, its waters are brackish, at twenty-one miles across, perfectly salt, the force of the tide being there perceptible. Although, when viewed from the point of Pomundi, which projects into it from the south, it has the appearance of a clear and open sea, yet it is, after all, exceedingly shallow; its medium depth is only four feet, and it is rapidly filling up from the decay of seaweed, and the deposits brought into it yearly from the Murray. "No doubt," says Captain Sturt, "but that future generations will see that fine sheet of water confined to a comparatively narrow bed, and pursuing its course through a rich and extensive plain. When that shall be the case," he adds "and that the strength of the Murray shall be brought to bear on one point only, it is probable its sea-mouth will become navigable."

Two small streams named the *Bremer* and the *Angas*, flow into Lake Victoria, which communicates at its south-eastern extremity with another lake, named *Lake Albert*, of about fifty miles in circumference, with a depth varying from four to ten feet. The water in Lake Albert is in some parts very good, in others, slightly brackish, but quite fit for use. From the sea-mouth of the Murray, a sandy coast, completely open to the ocean, stretches away to the south-east, forming the outer shore or sand-hills of the *Coorong*, a back-water of Lake Victoria and the Murray, which runs parallel with the sea for a distance of ninety miles, separated only by a ridge of sand-hills, some of which are from 300 to 400 feet in height, with a breadth varying from half-a-mile to a mile and-a-half. Its waters are salt; its average breadth about two miles. The inner shores (which appear to have been originally the boundary of the ocean) are broken with numerous rocky promontories, and shallow sandy bays indent its margin; towards the sea, the hills of sand rise in stupendous masses, forming a long and dreary peninsula, against which the surf of the southern ocean beats with unceasing violence. In some places the sand is so white, as to resemble snow, and contrasts strongly with the shrubs growing on these hills, which are of deep green. The Coorong terminates in a series of salt lagoons, after passing successive swamps intersected by belts of grassy soil and low hills, scattered over with casuarina and a variety of smaller shrubs; near its eastern extremity, a stream called *Salt Creek*, flows out of it, running through the desert country to the eastward. The Coorong is the resort of myriads of waterfowl, which in some places are so numerous, as to darken its surface; black swans, pelicans, ducks, teal, and shags, breed in perfect security amid its profound solitudes. Shell-fish and mullet abound in its waters, and the monterry, or native apple, grows in every direction over the bleak and desolate mountains of sand that form a barrier from the fury of the ocean.*

The termination of the Coorong is marked by a low granite range constituting a water shed, throwing the drainage to the north and south, respectively; from the shore a protruding mass of granite, about twenty

* *Australia Illustrated*, by G. F. Angas.

or twenty-five feet high, forms a bold point in a long, straight line of coast, and was mistaken for a cape by M. Baudin, who called it *Cape Morad-de-Galles*. This rock projects but a few feet; there is, however, from this point, a sunken granite reef jutting into the sea, apparently connected with the rocks that break the water in Lacépède bay, an inlet immediately beyond, which, it is supposed, will be found to afford sheltered anchorage to small vessels, even in the winter season.

From *Cape Bernouilli*, or *Jaffa*, a remarkable projection to the south of Lacépède Bay, reefs extend for a considerable distance. Many disastrous shipwrecks have occurred in its vicinity; among them, that of the *Maria*, whose unhappy passengers and crew —such of them, at least, as escaped the perils of the sea—met a yet more melancholy death; for after toiling along the dreary shores of the Coorong, under a burning sun, for nearly ninety miles, they were ruthlessly massacred by the Milmendura natives.

From Cape Bernouilli a ledge of rocks extends for ten or twelve miles towards *Godfrey Island*, which lies in the centre of *Guichen Bay*, a valuable outlet for the province, and a much-needed port of refuge, affording good anchorage, safe during every wind. From its south point (Cape Dombey) a ridge of rocks extends, which serves as a breakwater for the outside swell. A township was laid out here, in 1846, called Robe Town; and another, named Grey Town, was formed at Rivoli bay, about the same time. The shores between these bays are bordered by lakes or lagoons; which, however, do not communicate with the sea. The first of these—the nearest, that is, to Guichen Bay—named *Lake Hawdon*, cannot rightly be called a lake, being merely a flat swampy plain, which in the rainy season is covered with water. *Lake Eliza* and *Lake George*, both of considerable size, are separated from each other only by a narrow strip of land.

Rivoli Bay is a good haven, but, from its exposure to south-west winds, is not considered to afford proper shelter for square-rigged vessels. *Penguin Island*, so named from the vast number of penguins found there, lies off *Cape Martin*, the northern extremity of Rivoli bay; the southern, *Cape Lannes*, is, I believe, identical with the *Cape Buffon* of the French.

Immediately behind Cape Lannes, *Lake Frome* stretches southward towards *Lake Bonney*, a very extensive sheet of water, divided from the sea by a line of sand-hills.

Destaing Bay lies to the south of Lake Bonney; from thence the coast trends in a south-easterly direction to *Cape Northumberland*, in 38° 4′ S. lat., 140° 12′ 33″ E. long., when it turns to the east, presenting no feature worthy of notice between that point and its termination, a little to the westward of the mouth of the Glenelg.

Mountains.—Although the province of South Australia contains several continuous ranges of high land, it has none of any great elevation, the loftiest not much exceeding 3,000 feet. The *Mount Lofty range* stretches from Cape Jervis, along the east shore of Gulf St. Vincent, to the northward for about forty miles, there attaining an elevation of 2,334 feet. From this point a chain branches off to the westward, but the main range continues to run up towards the interior, into which Captain Sturt considers that it cannot extend far, or he must have seen something of it during his interior exploration. Captain Frome, in the map accompanying the account of his expedition of 1842, clearly connects it with the ranges traced by Eyre to their termination in Mount Hopeless, within the limits encircled by Lake Torrens, and speaks of the direction of what he terms "the dividing ridge between the basin of the Murray and the interior or desert plain, as generally about north-east from the highest point north of *Mount Bryan* (the *Black Rock Hills*, in about 32° 45′ S. lat.), gradually decreasing in elevation, and, if possible, increasing in barrenness." The summits of these hills were found to be invariably rock, generally sandstone; the lower slopes covered with dense brush, and the valleys with low scrub, with occasional small patches of thin wiry grass. At the highest points of elevation from Mount Bryan northward, igneous rocks, of basaltic character, exhibit rugged and fantastic outlines;—in about 31° S. lat. marked indications of volcanic action have been found, and several hollows resembling small craters of extinct volcanoes, near one of which a warm spring was discovered, temperature 76° Fahr., atmosphere 54°.

The principal summits of this range, viz., the Razor Back, Mount Bryan (to the south of which is the great Burra-Burra mine), and the Black Rock Hill, rise to the height of 2,992, 3,012, and 2,750 feet respectively.

The more western branch of the chain, sometimes called *Flinders' range*, follows the

eastern side of the head of Spencer's gulf; thence it runs nearly parallel with the inner shore of Lake Torrens for a very considerable distance, its most northerly extremity being, according to Eyre, *Mount Hopeless*, a low haycock-like peak, in 29° 30′ S. lat., beyond which he describes the horizon as presenting one low uninterrupted level; the hopeless nature of the adjacent country being too clearly evidenced by the existence of numerous brine-springs.

Mount Serle, a very prominent eminence, is situated about ninety miles to the south-west of Mount Hopeless. Mr. Eyre considered that it could not be less than 3,000 feet in height; but, from an accident which had occurred to his barometer, was unable to ascertain it with accuracy.

To the east of Mount Serle, and connected with the main range by low long spurs, is a ridge named *Mount Deception*, from the fallacious expectations raised by its height (which to all appearance could not be less than 3,000 feet), of finding permanent water in its vicinity. Its summit was found to be attainable only by winding along the steep and stony ridges leading round the deep gorges and ravines by which it is encircled.

The other principal peaks in Flinders' range are, *Mount Arden*, *Mount Brown*, and *Mount Remarkable*, so named by Captain Flinders. Mr. Eyre, speaking of Flinders' range between Mount Arden and Crystal Brook, a distance of about eighty miles, says that the character of the range varies but little. High, rocky, and barren, it rises abruptly from the level country at its base, the slopes to the westward being steep and precipitous, very hard, and ringing like metal when struck with a hammer. The hills have no other vegetation than prickly grass, and are in many instances so coated over with loose stones as to render their ascent, from the steepness of the declivity, dangerous, if not impossible.

To return to the Mount Lofty range, the high land between it and the Murray is ably described by Colonel Gawler, in his *Geographical Notes*, as the *Mount Barker*, or *Great Ironstone*, and the *Mount Wakefield* ranges; and although myself disposed to consider the whole, including that just described, as forming one great mountain mass, and not properly divisible into distinct formations, I yet give the following abstract of Colonel Gawler's statement, as affording valuable information on the subject.

The summit of Mount Barker itself, is about twenty feet higher than Mount Lofty. This elevation, however, is only continued for about a mile in length, by from fifty to one hundred miles in width. Beyond these limits the ground on all sides drops suddenly for 800 feet, Mount Barker rising like an isolated hill from the great table-land beneath it. This table-land is about 1,600 feet above the level of the sea. It runs in a broad belt parallel to the Mount Lofty range; its surface, presenting beautiful undulations of lightly-wooded low hills and gentle valleys. At from ten to fifteen miles south-west of Mount Barker, it falls rather suddenly to about 1,200 feet, and becomes covered with a stringy bark forest. From ten to twenty further, in the same direction, sharp, precipitous ridges, some of them attaining an elevation of from 1,800 to 2,000 feet, cross it in different directions. Between these, still upon high table-land, are formed the rich valleys of the Myponga, the Upper Finniss, and other streams, flowing severally to the westward, eastward, and southward. Immediately afterwards, entering along the range, still to the south-west, huge branches strike off to the sea, and from heights of from 1,200 to 1,500 feet, fall precipitously into it, along the line of coast which extends from Mount Terrible, the southern boundary of the Aldingha Plains, to Yankalilla. Other large branches shoot off from Myponga to the eastward of south, and fall with a more gentle descent towards the great bend of the Lower Murray, in the neighbourhood of Currency creek.

Mount Wakefield can scarcely be considered as distinct from the Mount Barker range; it is rather a mighty disruption from its south-western extremity. Between the two, for twenty-five miles from Yankalilla, in Gulf St. Vincent, to the mouth of the Inman, in Encounter bay, runs a very lovely valley varying from about six to two miles in width, well watered, and rich in soil adapted for agriculture, and in herbage for pasturage. In this valley are situated *Division Hills*, which separate the waters flowing into Gulf St. Vincent from those falling into Lake Victoria and the Lower Murray. Their summits are clothed with pastures, and their height is not above 800 feet above the sea, while that of the precipitous mountains which bound the valleys to the north and south, is from 1,200 to nearly 2,000.

The summit of the Mount Lofty range is narrow; it seldom exceeds a quarter of a

mile in width; that of the Mount Barker range, on the contrary, maintains a breadth of from six to ten miles, and though hills and ridges frequently intersect it, their elevation above the general summit is small, as compared with its height above the level of the sea.

Between the summits and the great valleys at the base, both in the Mount Lofty and Mount Barker ranges, runs a belt frequently from three to four miles in width, of very thickset, narrow, and tortuous spurs. These form, at first sight, the greatest obstacles in the way of practicable roads; but, on a close research, good passes over them may almost everywhere be found. The small valleys between these spurs are often very rich and well watered. The lower slopes of all these mountain ranges are almost everywhere composed of slate, the surface above the slate being always grassy. The summit of Mount Lofty is capped with a highly ferruginous sandstone, and large portions of the Mount Barker range with a conglomerate of ironstone and angular pieces of quartz; upon both formations Colonel Gawler declares himself to have invariably found stringy bark, forest, or brush.*

The heights termed the *Barossa Range*, about thirty miles to the north-east of Adelaide, form an undulating hilly country, lightly wooded, comprising several rich and picturesque valleys. The *Keizerstuhl*, the highest point in the range, has a beautiful outline, and the stream called the Rhine flows northward, through the pretty town of Bethany, where the German colonists have located, and given the names of several places in their fatherland to the more distinguishing features in the country around. The *Belvedere*, *Heranian*, *Hawdon*, and other surrounding minor ranges, do not present any very prominent features, but they offer much pleasing scenery.

A considerable portion of the peninsula which forms the south-western shore of Spencer's gulf, is occupied by a mountainous table-land, about 1,300 feet above the level of the sea, whose surface is traversed by many short and narrow mountain ridges, from 300 to 700 feet in elevation above it. From *Mount Otinthus*, situated thirteen miles from Franklin harbour, which attains a height of 2,000 feet, the view is magnificent, embracing, to the north-west, the whole course of the table-land for twenty-five or thirty miles, with many peaks at much greater distances; the north-east and east, *Middleback Mountain*, which is an offset from the table-land, the upper part of Spencer's gulf, with the mountains beyond it, and the coast further than Point Riley; to the south-east, Point Pearce and Wardang island; and to the south-west, the immense tracts of low undulating country, as far as *Mount Hill* (Flinders' *High Bluff*), an isolated peak about 1,500 feet high, forty-six miles north-north-east from Port Lincoln.†

Marble Range, about thirty miles north-west of Boston bay, rises abruptly, and when its steep sides of quartz receive the evening sun, it appears as if inlaid with diamonds. In the distance, to the north, another mountain range is visible, consisting of abrupt, lofty cones, the most remarkable of which, *Albert Peak*, is visible for a considerable distance. *Mounts Dutton* and *Greenly* are also seen to the west, beyond the Marble range, and the high sand-hills of Coffin's bay shut out the scene to the south.

To the north of Eyria Peninsula, between Mount Arden and Streaky bay, a singularly rugged and barren range, of about 2,000 feet in height, extends for a considerable distance. The succession of detached ridges forming *Gawler Range*, consists entirely of porphyritic granite, the front slopes exceedingly steep, and covered by small loose stones, and without either timber or shrubs. From the whole range, not a stream or water-course was found to emanate, the only water obtainable in its vicinity being afforded by the deposits left by very recent rains. The adjacent country is equally sterile and arid, the soil being in many places saline, with several salt lakes, but affording no indications of fresh water or springs.

Baxter Range, to the east of Gawler range, is high and rocky, rising abruptly out of the plains. It is distinctly visible from Mount Arden, from which it is about fifty miles distant. Its formation is entirely conglomerate, of rather a coarse description. Fresh water and good grass abound in its vicinity.‡

The country to the east and south of Lake Victoria is not marked by a coast range of mountains, running parallel to the Pacific like the "Blue Mountains" of New South Wales; there are, indeed, only a few eminences, that appear to be continuations of the parallel ridges which mark the Australian formations, and, so far as we know

* Colonel Gawler's *Geographical Notes*. † Ibid.

‡ *Eyre's Expeditions into Australia* 1841.

throughout the whole island-continent have generally a direction from south to north.

Mount Benson, a round-topped eminence, with an elevation of 700 feet above the sea, is the highest of a range of limestone hills visible from the sand hills at Lacépède bay. The view from the summit is that of "a sea of woods," with the blue plains melting away into the invisible distance.

Mounts Gambier and *Schanck,* eight miles apart, at a short distance from the coast, near Glenelg river, are volcanic cones. Mount Schanck, the nearest to the sea, rises at an angle of about 45° for 600 feet, from a comparatively level country, and attains an altitude of nearly 900 feet above the ocean. The interior of the mountain is one vast hollow basin, upwards of two miles in circumference, and so deep that the trees growing in the rich soil of the lower depths of the crater, appear like minute shrubs dotted over its surface. The outer side of the cone is clothed with grass, scattered over with "she oak" trees. The rim or outer edge of the crater is stated by Mr. Angas to be not more than a couple of yards in breadth. Mr. Burr says there are three distinct craters; the principal one is 500 yards in diameter; another to the east about one-third as high as the principal, and 200 yards across; and a third crater to the south is rather more elevated than the east, and 250 yards wide. The small craters are on the slope of the main crater, nearly circular, devoid of water, and covered with rich vegetation on the inner and outer slopes. The view from the rim of the main crater is very extensive, commanding the windings of the Glenelg river and the curves of Bridgewater and Discovery bays in Victoria province. At the base of the mountain to the north there are circular limestone basins, and the country around presents heaps of black cellular lava. To the south-east and south-west there is a large mass of cellular wacke, forming a wall six to eight feet in height, and appearing as if it had at one time formed a sea beach. Governor Grey and his party, when riding round the foot of the mountain, noticed particularly to the south-east a hollow sound, as if there were a vault beneath them.

Mount Gambier is rather higher than *Mount Schanck,* of an oval form, 600 yards long, by 120 yards broad, the largest diameter in a direction nearly east-south-east. Mr. Angas says, the foot of the mountain exhibits the walls of three distinct craters, each containing a lake of water. Mr. Burr states, that about one-third of the east portion of the crater forms a lake with high perpendicular cliffs, except to the west, where it is bounded by a gently sloping hill running nearly north and south across the crater, and dividing it into nearly two equal portions. The western portion of the crater has several lagoons, which contain water. The depth of the central lake of the crater is very great, the water good, and frequented by numerous wild ducks.

Mr. Angas expresses his "rapturous admiration of the glorious and enchanting scene," which the sudden view of the largest crater presented, when he reached the summit of the mountain; a vast hollow basin was, as it were, shut out from the world by the walls of lava that surrounded it, and covered with emerald verdure, burnished to a bright metallic green by the golden tints of evening; small hills, like miniature craters, interspersed among plains and valleys, carpeted with grass of velvet smoothness, scattered with a few blackwood or mimosa trees, form one portion of this enchanting dell. At its western extremity, terrace above terrace rises along the sides of the mountain, with occasional caverns of red lava. The deep, still lake, with its black-looking waters, is surrounded by lofty cliffs of pure white coral. The country between the two mountains is very rich, and the scenery beautiful.

Governor Grey discovered at the foot of Mount Schanck several caves containing numerous organic remains, with bones of the emu, gigantic species of kangaroo, and a tooth which must have belonged to a marsupial animal of gigantic size.

A low ridge to the north-west connects Mount Gambier with the *Mount Burr range,* which has an elevation of about 1,600 feet, and is generally steep to the south-south-west and west; but on the opposite side the ascent is very gradual. The country around appears to be of the most promising description for the settler.

Rivers.—There are but few streams within the limits of South Australia which deserve the name of rivers, either from the length of their course or the body of water they contain, by far the larger portion being for the greater part of the year merely chains of ponds. Their channels however are generally of considerable depth; and though frequently almost dry in the hot season, a mighty flood rushes along during winter; as is shown by the residue of sticks, scum,

and grass, left in the branches of the gum trees that line their course, for many feet above the supposed ordinary height of the stream. Nevertheless the province is by no means so deficient in its supply of water as is frequently supposed, for even after its streams have almost or quite ceased running, abundance remains in the pools, many of which from their temperature and other causes, appear to be supplied by springs and under-currents. Even in places where no surface-water can be found, wells may be sunk, as good water is almost invariably found at depths varying from eighteen to sixty or eighty feet. The absence of surface-water is however naturally looked upon as a serious defect, and at Port Adelaide was doubtless the chief reason for which the town was built away from the harbour; but a well has lately been dug within 100 yards of high-water mark, where, at a depth of only a few feet, excellent water has been obtained in sufficient quantity for the uses of the whole population, and the shipping which frequent the port.*

The one striking exception to the usual insignificant character of the South Australian rivers is formed by the noble *Murray*, the upper portion of whose course, under the denomination of the *Hume*, we have already traced to its junction of the Murrumbidgee, river (see pages 585 and 586). From thence to the confluence of the *Darling* the Murray passes through a barren and unpromising country, where, excepting on its immediate banks, neither water nor food can be obtained. Boundless plains of sandy soil, covered with salsolaceæ, extend to the north and south, alternating with brush and forest land. A little below the Darling (on the left bank of the Murray) a succession of lagoons occur, backing flats of considerable extent, clothed with nutritious herbage, but the plains to the northward preserve the same sandy and barren character for many miles. On the right bank of the Murray is the junction of the ana-branch or ancient channel of the Darling, and on the same bank, more to the eastward, are two lakes (*Victoria* and *Bonney*), situated a few miles from the left bank of the Murray,† whose surplus waters they receive by means of their respective channels, the *Rufus* and the *Hawker*. By this distribution of its waters the floods of the Murray are prevented from being excessive, or rising above a certain height. Between the lakes above mentioned, and especially in the vicinity of a little sandy peak named Mount Misery, the country is described in very unfavourable terms, the river itself being flanked by high level plains on both sides, while cliffs of 100 or 120 feet in height, composed of clay and sand, rise above the stream, their faces presenting the appearance of fretwork, so deeply and delicately have they been grooved out by rains. The soil of this upper table-land is a ferruginous clay and sand. The vegetation is chiefly salsolaceous, with scattered tufts of grass.

In 34° 9′ 56″ S. lat., an extraordinary change takes place in the bed of the river; for at this point commences the great fossil formation, through which the Murray flows during the remainder of its course.

The following interesting particulars respecting the river and its singular channel, are given on the authority of Governor Gawler and Captain Sturt; the geological formation of the latter will be described in its proper place.

In 34° S. lat., the river makes the decided bend to the southward, commonly termed the Great Bend, angle, or elbow of the Murray, and from thence continues in a southerly direction to its entrance in Lake Victoria; its banks, meanwhile, being characterised by a broad line of scrub called the Murray belt, composed of a thick brush of slender trees, shrubs, and bushes. When the surface is sandy, the pine predominates; when otherwise, eucalypti, exocarpi, acaeia, and a large variety of others, many of them very beautiful. On the western side of the bank this brush is generally from fifteen to twenty miles in breadth. On the same bank a stripe of open ground usually intervenes between the brush and the valley of the river, covered with grass and salsolaceæ. North of the Great Bend, the brush almost wholly disappears, and the open ground spreads out into enormous plains, from sixty-five to eighty miles in length from north to south, and to the eastward extending to the limits of vision. If water could be procured, these plains, and the mountains which bound them, would be good sheep pastures.

The most remarkable feature of the surface of the great fossil formation, is its want of water-courses and water. Along the im-

* Bennett's *South Australia*.

† At page 384 mention was made, on the authority of Captain Sturt, of a supposed tributary of the Murray, named the Lindesay, which has subsequently proved to be only an ana-branch of the Murray itself.

mediate banks of the Murray, water has worked out deep gullies, but these are very short. Generally, the rain appears to lodge on its surface in very numerous shallow patches, and to be carried off by evaporation. The valley of the Murray, in its whole length,—*i. e.*, for about 200 miles—in South Australia, is a hollow cut through this great fossil formation, to nearly the depth of the level of the sea, so that the hills and cliffs of either bank rise sometimes close to the margin of the river, sometimes at distances of one or two miles from it, to an elevation of about 300 feet. The scenery is rendered peculiarly attractive by the bold outline of the cliffs, whose colour varies from a light shade of yellow to a deep ochre.

The valley itself, in its whole course, is from three-quarters of a mile to two miles in width—the more general width being about a mile and-a-quarter. The river flowing through it, is from 100 to 250 yards in width, the more general breadth being between 150 and 200. Immediately above its entrance into Lake Victoria, it is 170 yards wide, fresh, and very deep. The least depth that has been observed between the Great Bend and Pomunda (the western point marking the mouth of the river), was twelve feet; but such comparative shallows are very rare. The river varies, during this portion of its course, to depths of forty feet, retaining the latter for a long distance, before joining the lake. The deep water in general holds very close to the banks. The flow of the current is about a mile an hour, immediately above the Bend; from a mile to a mile and-three-quarters, for two-thirds of the distance, towards the mouth; and for the remaining third, about half-a-mile. The long lines of hills and cliffs which bound the Murray valley, maintain throughout a rough parallelism to each other, but the river scarcely ever preserves an equal course between them. It sweeps continually in magnificent reaches, from side to side, forming perpendicular cliffs wherever it strikes the hills, and encircling never-ceasing flats of from half-a-mile to four or five miles in length.

The formation of these flats is remarkable. It is evident, that at a very distant period, the whole breadth of the valley was covered by water. After this, by degrees, the current striking against a cliff, and flying off towards the opposite side of the valley, left between it and the cliff a bank of detritus. This bank, for some distance, has occupied the whole space between the strong current and the cliff. Continuing onward, a back-water was formed between the detritus and the cliff, and the bank has been carried on in a long narrow stripe between the strong current on the one hand, and the back-water on the other, until the river, striking against the opposite cliff, and returning again, after a long sweep, to the side first alluded to, formed a great semicircular flat, with a stripe of detritus as an outer embankment between it and the strong current, and a large back-water lake in the centre of the flat, communicating with the river by a narrow channel at its lower extremity. These back-water lakes have been gradually filled by alluvial deposition; most of them are now above the level of the river, and are covered with a light but excellent soil. The soil of the detritus banks is of course inferior; it is composed of the lime and sand of the cliffs, with some vegetable alluvium. Wherever the flats are fully formed, the margins of the river and back-water lakes are mostly lined with very fine flooded gum-trees, and a considerable part of the remaining solid ground with the box-tree.

The order of the formation of these flats has been most regularly successive. Those at and above the Great Bend are perfectly formed; their detritus banks are nearly twenty feet above the level of the stream, and clothed with magnificent gum-trees of all ages, while reeds have nearly disappeared from the soil. Proceeding downwards, the detritus banks very gradually diminish in height, reeds become numerous, and gum-trees thinly scattered; until at length, in the lower part of the stream, trees disappear, and the flats become vast expanses of reeds; the last of them, that within four miles of Pomunda, retaining its long stripe of detritus bank, and its back-water lake, in such extensive dimensions, that navigators with the stream would mistake the back-water lake for the river.

Captain Sturt, describing the Lower Murray and the Upper Murray, or Hume, as one river, says, "the heads of its immediate tributaries extend from the thirty-sixth to the thirty-second parallel of latitude, and over two degrees of longitude; that is to say, from the 146th to the 148th meridian; but, independently of these, it receives the whole westerly drainage of the interior from the Darling downwards. Taking its windings into account, the length of the Murray cannot be less than from

1,300 to 1,500 miles. Its rise and fall are both gradual. It receives the first addition to its waters from the eastward, in the month of July, and rises at the rate of an inch a day until December, in which month it attains a height of about seventeen feet above its lowest or winter level. As it rises, it fills in succession all its lateral creeks and lagoons, and it ultimately lays many of its flats under water. The natives look to this periodical overflow of their river with as much anxiety as did ever or do now the Egyptians to the overflowing of the Nile. To both they are the bountiful dispensation of a beneficent Creator; for as the sacred stream rewards the husbandman with a double harvest, so does the Murray replenish the exhausted reservoirs of the poor children of the desert with numberless fish, and resuscitates myriads of crayfish that had long lain dormant underground; without which supply of food, and the flocks of wild fowl that at the same time cover the creeks and lagoons, it is more than probable the first navigators of the Murray would not have heard a human voice along its banks."

As a line of communication between distant colonies, the Murray is of great and indisputable importance. Captain Sturt considers that, as a commercial river, it will not be of practical utility, because it runs for more than five degrees of latitude through a desert, is tortuous in its course, in many places much encumbered with timber, and its depth entirely depends upon the seasons. Other authorities, however, entertain a different opinion on the subject, and deem the Murray navigable at certain seasons for a considerable portion of its course; and, consequently, likely to facilitate internal transit very materially, notwithstanding the evident non-navigability of its sea-mouth, and the impossibility of a vessel entering it from the ocean, except in unusually calm weather, from the united force of the current and the immense sweep of rollers, which rise and break for the distance of a couple of miles before the entrance to the mouth of the river is attained.

Before leaving the Murray, we must not omit noticing the "Murray cod" of the colonists, a beautiful and well-flavoured fish, caught at certain seasons in considerable quantity; the general size varying from 15 lbs. to 25 lbs., but frequently much larger. Captain Sturt mentions having seen one, caught by Mr. Scott (the successor of Mr. Eyre at the Protectorate station at Moorundi), that weighed 72 lbs. Large numbers of a smaller but better kind, about twelve inches in length, resembling the English perch, have recently been taken with nets. While the waters of the Murray are thus occupied, its banks are enlivened by numerous flights of the crested pigeon, the cockatoo, and a vast variety of parrots, whose brilliant plumage contrasts charmingly with the fine gum-trees, which form one of the most pleasing characteristics of this noble stream.

The other streams at present known in South Australia are, the *Inman, Hindmarsh, Currency Creek, Finniss, Angas,* and *Bremer,* falling into Encounter Bay and Lake Alexandrina; the *Yankalilla, Curricalinga, Myponga, Onkaparinga, Sturt, Torrens, Upper* and *Lower Para, Gawler, Hutt, Light, Wakefield,* and *Rhine,* falling into or running towards Gulf St. Vincent, and the *Broughton, Dutton,* and several small streams falling into or flowing toward Spencer's gulf. Not any of these are of sufficient importance to need any detailed notice in this place, especially as many of them will be mentioned in the description of the districts to which they respectively belong.

Lakes.—The known lakes of this province, like its rivers, form but a meagre catalogue; yet, among them are comprised two names already familiar to my readers, to which considerable interest attaches, *i.e. Lake Victoria* or *Alexandrina,* the large shallow lagoon recently described as the receptacle of the Murray river, and *Lake Torrens,* that huge and strangely-shaped basin which strikes the eye as so remarkable a feature in the map of the island-continent of Australia.

Lake Torrens, also, we have before had occasion to describe, in relating the explorations of Mr. Eyre (p. 385). It appears formerly to have communicated with Spencer's gulf, and, indeed, is still connected with the head of the gulf by a channel now filled up, but soft and boggy, in places containing salt water mixed with the mud. The lake extends in the form of a horse-shoe over a circuit of at least 400 miles, encircling the numerous ridges of moderate elevation, which form the northern extremity of Flinders' range, and receiving the whole drainage from them. The apparent breadth of the lake has been before stated, on the authority of Mr. Eyre, who traced its shores on the western side of Flinders' range for 200 miles, to be from twenty to thirty miles; while Sturt, who visited its north-eastern portion in 1845, mentions it as only

from ten to twelve miles across. The deceptive appearances caused by mirage and refraction, on its shores, are most extraordinary, and render the evidence of vision very insufficient. Eyre made various attempts to cross the lake, and on one occasion, penetrated into the basin for about six miles, but was always compelled to retreat, by the increasing softness of the mud; once, only, did he succeed in tasting its waters, in a small arm near its most north-westerly portion, and here they were perfectly clear, about two feet deep, as salt as the sea, and of the same greenish hue. The south-eastern portion of the bed of the lake is stated by Captain Frome to be quite dry, and "more properly a desert, than a lake."*

To *Lake Albert*, which is connected with Lake Victoria, Lake Bonney, and other lakes and lagoons mentioned in tracing the coast-line of this province, we need not again refer.

Of the two pretty inland lakes connected with the Murray, named *Victoria* and *Bonney*, the former is about twenty-four miles in circumference, very shallow, and at times nearly dry; the tortuous channel called the *Rufus*, by which it receives the surplus waters of the Murray, is about eight miles long. Lake Bonney is ten miles in circumference and very shallow, and is supplied solely from the Murray; but its channel, —the *Hawker*, which, taking its windings, is about six miles in length — being too small to discharge the water equally with the fall of the river, has a current in it, at certain times, which gives it the appearance of a tributary, rather than merely a recipient.

Topography—*Settled Districts.*—The chief portion of the province at present divided into counties, is situated between St. Vincent's gulf and the Murray, on the east and west, and between Broughton river and Encounter bay, on the north and south. These counties (eight in number) were established in 1845. That which first claims our notice, as containing the capital of the province, named,—

Adelaide County, is bounded† on the east, by Gulf St. Vincent; on the south, by the county of Hindmarsh, as far east as Mount Barker; thence by a line continuing along the main range to the division of the waters between the Gawler and the Rhine, and following the creek Moorooroo (Jacob's creek), to its junction with the Gawler, that river then forming the northern boundary to the sea-shore, not including, however, the portion of the Gawler special survey laid out on its left bank.

The City of Adelaide is situated about midway between the northern and southern extremities of Adelaide county, in 34° 57′ S. lat., 138° 38′ E. long. Although now an episcopal see, as well as a corporate city, possessed of the rights and responsibilities attaching to ecclesiastical and corporate power, it is not yet fifteen years old, for the first intending settlers reached the shores of Gulf St. Vincent the 27th July, 1836, not knowing where they were to locate themselves, for the territory on which they landed had never before been trodden by the white man; but was the abode of the kangaroo and emu, and roamed over by tribes of wandering savages in quest of food. The measures which were taken for selecting the site of the capital of the colony, have been previously stated; but the misunderstanding between Colonel Light and the governor, respecting the position chosen by the former, and the incompetency of several of the assistant-surveyors sent out, caused considerable delay in preparing the lands for selection; much disappointment was experienced by the settlers who had paid in money in England, and expected to be put in immediate possession of the land on their arrival. Until this was done, some

* A striking contrariety exists between the accounts given of different portions of the lake by Mr. Eyre and Captain Frome, the former describing it from close examination on the west side of Flinders' range, as girded throughout by a steep ridge, like a sea shore from which you descend into a basin, certainly not above the level of the sea, possibly even below it, the whole bed being composed of mud and water; while Captain Frome, who visited its south-eastern extremity, declares it to be "rather a desert than a lake, consisting of loose drifting sand and low sandy ridges, very scantily clothed with stunted scrub on their summits." Mr. Eyre considers that Captain Frome had not reached the *basin* of Lake Torrens—first, because of the manner in which the drainage is thrown off from the east side of Flinders' range, and the direction which the watercourses take to the north-east or north; secondly, because an apparent connection is traceable in the course of the lake from the heights in Flinders' range, nearly all the way round it; thirdly, because the loose sands and low sandy ridges, crowned with scrub, mentioned by Captain Frome, are very similar to those met with near Lake Torrens on the west side, *before* arriving at its basin.

† The boundaries of this and of the other counties of South Australia, are chiefly cited from the proclamation of the local government, by which they were fixed; they are, perhaps, somewhat too minutely stated for the general reader, but the accurate topographical information thus incidentally conveyed, will, I think, make amends for that defect.

of the new comers remained at Nepean bay, in Kangaroo island; but the greater part pitched their tents on a plain, subsequently called Glenelg, close to the beach, at Holdfast bay, there to await the completion of the survey. When the site of the capital was fixed, most of the emigrants removed thither; but, as the applotments were not yet laid out, and the question of priority of choice was to be settled by a lottery, the adventurers were under the necessity of forming another temporary encampment, and the banks of the Torrens river were soon lined with huts erected from the materials most readily procurable; some being constructed of mud and interlaced branches, termed "wattle and daub;" others of turf, of brushwood, or of reeds, and for a roof, thatch, or a piece of canvass, was used. A few had tents, or wooden houses, made in England; fire-places were, fortunately, not essential, but several huts had an opening at one end, enclosed on three sides with stone slabs, and a pork-barrel deprived of its ends, for a chimney; outside the huts a blazing fire was kept, with a huge pot swung over it, gipsey fashion. These primitive structures afford a good idea of the aptness with which Englishmen and *Englishwomen* accommodate themselves to the exigencies of a novel and trying position, and of the speed with which they establish something even of comfort around them, under the most unpromising circumstances. Five months elapsed between the arrival of the first emigrants and that of Governor Hindmarsh; meanwhile, they would have been totally without law or government, had not a strong sense of mingled justice and expediency urged them to establish an authority and to obey its dictates. Indeed, the early settlers appear to have manifested a great deal of sound common sense in their proceedings; to use a colonial expression, each one soon began "to shake down" into his proper position, and orderly communities were established, first at Nepean bay, and afterwards, at Holdfast bay, even before the arrival of the governor.

In January, (27) 1837, Mr. Edward Stephens, then dwelling at Glenelg Plains, addressed a circular "to the purchasers of the first sections of land in South Australia," urging their assembling to examine the proposed site of the chief town on the Torrens, and to remove all doubt or question as to the superiority of the place. On 2nd February, 1837, an address was presented to the governor, signed by eight gentlemen, requesting that a public meeting might be called on the subject. This was accordingly done on the 10th February, when a motion was carried by 218 land-order votes to 137, in favour of the position on the Torrens chosen by Colonel Light, and it was declared that he had "most ably and judiciously discharged the responsible duty assigned him by the South Australian Commissioners."

In March, 1837, the survey of the town lands was completed; the selections were made by those who brought land orders from England, and the remainder were sold to the highest bidder, the prices varying from £2 to £20 per acre; the average price was £5 per acre. Within the ensuing three years, some of the parties who had purchased at these prices, sold their lots at £200 to £2,000 per acre. The site chosen for the new city, named after the excellent Queen Adelaide, was on a sloping ground, with grassy flats and umbrageous trees, on the north and south banks of the Torrens river, about six miles from Port Adelaide, on the east side of Gulf St. Vincent, and about six miles from Mount Lofty, the beautiful hilly range before described. The portion of the city on the south side of the river comprises 700 acres, and is nearly level; that on the north side contains 342 acres, and is elevated, so as to afford a fine view of the surrounding country, embracing to the eastward the darkly wooded valley of the river, and the peaks and elevations of the Mount Lofty range, with the lighter wooded country at its base; to the eastward commanding the whole extent of the Adelaide plains. The activity of the colonists, when they became certain of the site of their city, was soon visible. In June, 1837, it was noticed in the *South Australian Gazette*, that the good citizens were fast emerging from the semi-savage state of life which was at first inevitable; "a cottage planted and fenced round with a substantial English iron fence, a roof adorned with a cupola, surmounted with a weathervane, and a door, too, graced with a handsome knocker," belonging to Mr Osmond Gilles, the colonial treasurer, triumphantly proved the progress of civilization. During December, 1837, Mr. Morphett remarked that the small park land was being cleared of temporary erections, and that dwellings were being constructed of a superior order, all in the cottage style. They were built some feet from the front lines of the

streets, in order that they might serve for out-houses and offices, when more substantial edifices were erected. A Government House was constructed by the seamen of H.M.S. *Buffalo*, and consisted of mud put between laths, supported by wooden uprights, and covered with thatch. The sailors omitted, in "rigging the house," to place a fire-place or chimney.

Mr. J. F. Bennett, who reached Adelaide in March, 1839, says, that it still retained somewhat the appearance of a collection of booths, such as may be seen at a country fair. Brick and stone were then, however, beginning to take the place of straw and mud, and shingles and slates had partly supplanted canvass and reeds. The old hut gave way to the neat cottage or handsome two-story house. The first tenement erected in Adelaide, even when a few stakes or "pegs" were all that distinguished it from the surrounding forest, was a printing-office, from whence issued a newspaper, which contained the official acts and orders of the government, and the latest intelligence respecting the geography and capabilities of the new land. A wooden church, sent from England in frame, with sittings for 350 persons, was erected near Holdfast bay, at an early date; and on 26th January, 1838, the foundation stone of *Trinity Church* was laid, at Adelaide, by the governor, in the presence of a numerous assemblage of subscribers to its erection. On a leaden plate, was inscribed the names of the trustees and of the incumbent, with the following sentence from Nehemiah ii. 20:—"*The Lord of heaven he will prosper us; therefore we his servants will arise and build.*" An extensive store, built of limestone, at a cost of £2,000, was erected by Messrs. Fisher, in the centre of the town; and in a remarkably short space of time Adelaide had assumed many of the characteristics of an established town. There were, says Mr. Morphett, "neatly and in some cases elegantly spread dinner tables, well-cooked dishes, champagne, hock, claret, and maraschino, the presence of some well-bred and well-dressed women, and the soothing strains of a piano." The illusion of sitting at the hospitable board of some luxurious London citizen was only dispelled by the visitor, on quitting the hall-door, tumbling against a cow, pig, or some such indication of colonial prosperity.

Adelaide received a severe check, in 1841–2–3, at the period of general depression before mentioned; but it has since recovered, and made considerable progress; and it now ranks highly among the colonial towns in her Majesty's dominions, and eventually promises to become a noble city. The extensive scale on which it is laid out, and the ample provision thus made for the accommodation of a much larger population than it possesses at present, or is likely to possess even for many years, gives it rather a straggling appearance; but the fault, if it is one, is on the right side; and the plentiful circulation of fresh air thus secured must be very conducive to the health of the inhabitants.

Captain Sturt, writing, in 1849, of the southern portion of the city (which, it will be remembered, is divided by the Torrens into two portions, distinguished as North and South Adelaide), says it is twice the size of the northern, is more extensively built upon, is the established commercial division of the city, and contains the Government House and all the public buildings and offices. The shops and stores now built are of a substantial and ornamental character. The Government House stands in a well-kept enclosure of nearly ten acres, and has the appearance of an English country mansion. It is capable of enlargement. The public offices, built in a parallellogram, with an open space in the centre, are creditable to the colony; and the gaol, on which £36,000 have been improperly expended, is a large and substantial structure.

There are several Christian temples. *Trinity Church*, built of stone, stands on the north terrace, and forms a prominent object; *St. John's*, built of brick, is on the east terrace, from whence there is a commanding view of the Mount Lofty range. *Christ Church* is in North Adelaide. The Roman Catholic church, with its excellent public schools, stands in a fine situation on the west terrace; and there is a Roman Catholic cathedral, I believe, now building. There are several other churches and chapels, appropriated for the worship of the different Christian denominations. The Bank of South Australia is a prominent feature on the north terrace; and there are several other good buildings in various parts of the city. A theatre, capable of holding 1,200 persons, which was built a few years ago, and proved an unprofitable speculation, is now rented by government at £200 a year, and used for the supreme court, resident magistrates, sheriffs' offices, &c.

The streets have respectively a width of 66, 99, and 132 feet, intersect each other at right angles, and are sufficiently elevated above the bed of the Torrens to facilitate a perfect system of drainage, which is very much required; for, with the exception of Hindley and Rundle streets, the thoroughfares are unpaved, and large masses of rubbish are allowed to accumulate. Unless attention be paid to the drainage of Adelaide, a damp summer, followed by great heat, may cause a severe pestilential disease; for it is by the neglect of such precautions that, in climates like South Australia, plague finds not only a temporary but a permanent abiding place.

Hindley-street, about a mile in length, has many excellent warehouses and shops, with elegantly designed fronts and plate-glass windows. It is the principal place for business, and presents an animated appearance.

A large cemetery, sufficient for the requirements of Adelaide for many years to come, is situated outside the city line, on its western boundary.

Adelaide is abundantly supplied with water from the Torrens, and by means of wells sunk sixty to eighty feet. There are numerous springs in the hills, five miles distant, and at sufficient elevation to enable every house to be supplied by pipes.

Four bridges over the Torrens connect the two divisions of the city, which is surrounded by a public demesne, termed the "Park lands," for the breadth of half-a-mile. The advantage of these reserves cannot be doubted, although at present they increase the straggling appearance of the city, and must do so until Adelaide attains the importance anticipated for it by Colonel Light, to whose respected memory a monument, consisting of a pentagonal Gothic cross, forty-five feet in height, has been erected in the centre of Light-square, at Adelaide.

On both sides of the river between North and South Adelaide there are reserved allotments, to the extent of 200 acres, for the formation of pleasure-grounds and public gardens.

Beneath the umbrageous canopies which enhance the beauty of the city park, the annual horticultural and agricultural show of South Australia is held; and the occasion is a festive holiday for the city of Adelaide and the surrounding country. On this occasion, not only many varieties of delicious fruits, beautiful flowers, and choice vegetables are exhibited, but also articles of export and of domestic economy, raised and prepared by the industry and skill of the colonists, together with models for agricultural implements, samples of corn, wax, honey, leather, starch, and other useful commodities.

Beyond the Park lands, which together with the city contain 400 acres, the "preliminary" or country sections, of 134 acres each, commence. Many of these have been laid out in smaller sections, and are being rapidly built on and improved.

The race-course of Adelaide is a peculiarly good one; and during the three days in the begining of January annually devoted to this favourite amusement, the settlers from far and near throng to the city, racing being in this, as indeed in all the Australian colonies, a very popular pastime—as are also the other English sports of hunting, cricket, &c.

Level plains extend between the city and the *Port of Adelaide*, in 34° 51′ S. lat., 138° 34′ E. long., which is situated on the eastern bank of a large creek running nearly parallel with the coast for about twelve miles, and assuming, with its numerous branches, the appearance of a river. There are two entrances from seaward — the northern is shallow; the southern contains deep water, which is continued for ten miles. It is a very fair harbour, although originally it had only twelve feet at low water on the outer bar. By means of a dredging machine, the sand has been removed so as to allow vessels of 300 to 400 tons to pass into the haven; and from the nature of the submarine formation, the bar may be removed to a still greater extent, if necessary, and any improvement thus effected will be permanent. During the rainy season the Torrens pours some of its waters into the head of Adelaide creek. There is a light ship off the bar, at the entrance of the Port Adelaide creek, and a steam-tug now enables vessels to reach the shipping station without the vexatious delays to which they were formerly subjected. That portion of the population connected with the shipping or the harbour, reside on the spot, and give to Port Adelaide the appearance of a small town; but the only substantial buildings are the wharfs, one belonging to the government, the other to the South Australian Company, and the custom-house. There is a good macadamized road between the port

and city of Adelaide (distant about seven miles), constructed at an expense of £12,000 by the South Australian Company, and subsequently transferred to the local government, in exchange for 12,000 acres of land. But a rail or tram-road is still much needed—not only from the port to the city, but also to Gawler town—for the conveyance of ore and wool to the place of embarkation; this useful measure will, it is expected, be soon accomplished.

Another excellent road, the foundation of which is of stone brought from Kangaroo island, has been constructed across a mangrove swamp, between the port and *Albert Town*, a straggling village about a mile distant; the cost of this road, from the expensive period at which it was commenced, is stated at £14,000, which is improbable.*

Besides that connecting it with the port, four other roads branch off from Adelaide, of which one leads north through Gawler town—another, called the *Great Eastern Road*, to Mount Barker and the Murray; the third, running southwards, crosses the range to Encounter bay; and the fourth, to Glenelg and Holdfast bay.

There are several pretty villages in the vicinity of Adelaide; indeed, within five years of its establishment, upwards of "*thirty* villages were started" within three miles of the city; in 1841, there were but *seven* remaining, viz., *Hindmarsh*, containing 200 houses; *Bowden*, 50; *Prospect*, 25; *Thebarton*, 100; *Kensington*, 40; *Walkerville*, 50; *Islington*, 15. Hindmarsh, Bowden, and Prospect, were principally inhabited by persons engaged in the carriage of goods from Port Adelaide to the city, and by brickmakers and labourers. Thebarton and Walkerville contain many substantial houses. Kensington and Richmond are quiet and secluded villages embosomed in trees, with neat residences, and beautiful gardens. Islington, on the high-road to Gawler, is a favourite place for dairymen, on account of the good cattle runs immediately behind the village, which contains several good inns.

About three miles from Adelaide, on the right bank of the Torrens, is the village of *Klemzig*, the oldest of the German settlements; the houses having been built by the refugees on the plan of those of their native country, contrast pleasingly with the general style. The scenery in the valley of the Torrens is described as picturesque, its grassy flats being shaded by beautiful and umbrageous trees, and the land in the vicinity of the sources and tributaries of the Torrens is very valuable. The river itself, although in summer frequently but a chain of deep broad pools, with long intervening dry spaces, in the winter pours down an impetuous stream, furnished by the mountain torrents, whose channels lie in the deep glens or ravines that occur between the spurs of the Mount Lofty range. The scenery around the heads of these little streams is described by Mr. Angas as wild and romantic, especially that of Glen Stuart, a rocky pass between the hills; during its course through which the Moriatta rivulet dashes over steep chasms of rock, with precipices rising like walls on either side, forming three distinct waterfalls. In one of these the water has a descent of some seventy feet, falling into a deep pool, from which it again emerges on its downward mission to the plains.

The borders of this stream are in many places choked with the fresh-water tea-tree; the native lilac, and a dwarf species of mimosa are frequent along its banks. The variety of Xanthoreæ or grass-tree, styled Black Boy by the settlers, overruns the rocky sides of the hills, usually abounding in the most stony and inaccessible places.

The marine townships of *Glenelg* and *Brighton* have a good beach, and are frequented as bathing-places by the inhabitants of Adelaide: a charming ride of four or five miles, along an excellent road, brings the citizen to the bay, which is a favourite evening's excursion after the heat of the day is over.

The little river Sturt falls into the gulf at Glenelg, after spreading over the flats behind the sandhills at that place. On its banks, as also on those of the Onkaparinga, a more important stream about fifteen miles to the southward, there are excellent farms. The township of *Noarlunga* is well situated about two miles from the head of the Onkaparinga, which is navigable so far for small craft. A large steam flour-mill, and a bridge of 100 feet span, have been erected; several lodes of copper ore exist in this vicinity. Beyond Noarlunga is the township of *Willunga;* the country between is generally good, portions of it are sandy and scrubby, but Morphett's Vale is a rich and extensive piece of land, from which Sturt mentions having seen several large stacks of hay cut, before it was settled, and while yet in a

* Angas' *Savage Life*, p. 207.

state of nature. Willunga lies close under the foot of the hills, which here trending to the south-south-west, meet the coast line extremity of the Southern Aldingha plains. Close to this point is the conical hill named *Mount Terrible*. The Mount Lofty range which forms the eastern boundary of the extensive plains on which Adelaide stands is about three miles distant; the intermediate space traversed by the Great Eastern or Mount Barker road, is laid out in carefully cultivated farms. On the first rise is the Glen Osmond lead mine, from thence the road winds up a romantic valley to the summit of the range, which is covered with a dense forest of stringy bark, and adorned with a great variety of papilionaceous plants; and several beautiful kinds of orchidaceæ. On the eastern confines of Adelaide county is the village of *Halndorf*, with its industrious Prussians, situated among the Mount Barker hills, and the village of *Nairne*, immediately to the north of which is Mount Torrens.

To the north and east of the city of Adelaide are extensive tracts of fertile land, intersected by the valleys of the North and South Para rivers, beyond which lie the rich districts of Lynedoch valley, of which however but a small portion is comprised within the county whose leading features we have now noted.

The names and limits of the four counties north and north-east of Adelaide, are as follows:—

Gawler County, bounded on the south by Adelaide county as far as the extreme east of the Gawler special survey (all of which it includes); thence by a line following round this survey to the main north road, and running along this road to the crossing of the Wakefield river, bounded on the north by this river, and on the west by the coast.

Light County, bounded on the west by the Gawler county, and on the south by Adelaide county, as far as the dividing ridge between the Gawler and the Rhine; thence by a line following the main range to the north, past Mount Rufus, to above the sources of the Light, in the parallel of about 33° 50′; turning round the ridge on the west bank of the Gilbert, in a line nearly direct upon Mount Horrocks, until it meets the eastern sources of the Wakefield, and running along this river to the crossing of the northern road.

Stanley County, bounded on the south by the counties of Gawler and Light, on the east by the main range as far as the parallel of 33° 20′, and then by the down course of the Broughton river, till about due north of the mouth of the Wakefield, a line connecting these points forming the western boundary.

Eyre County, bounded on the south by Sturt county; on the east by the Murray, (including the sections laid out on each bank), as far as the Great Bend; from thence by a direct line to the north-east angle of Light county, which forms the western boundary.

Of the territory comprised in these four counties, the central and southerly portion is the most settled. The chief place—*Gawler Town*, situated in the angle formed by the junction of the little Para and Gawler rivers, though yet in its infancy, promises to become of considerable importance; it contains a church, three or four good inns, a steam flour mill, several stores, and other buildings. The copper ores from the Burra-Burra mines pass through this town for shipment at Port Adelaide, which is about twenty-three miles distant. Gawler river rises in the southern part of the Barossa ranges, and after receiving the Little Para, flows to the westward of the shores of St. Vincent's gulf. It has extensive and well-wooded flats of deep alluvial soil along its banks, flanked by the plains of Adelaide, the line of trees running across them, only with a broader belt of wood, indicate the course of the river in a similar manner to that of Adelaide creek. "Except these features," says Captain Sturt, "and two or three box forests, at no great distance from Albert town, the plains are almost destitute of timber, and being very level, give an idea of extent they do not really possess, being succeeded by pine-forests and low scrub to the north from Gawler town."

Beyond Gawler town, both to the north and east, a decided change becomes perceptible in the character of the country; the monotonous plains give place to an undulating and highly wooded district, containing many fertile valleys. The road between Gawler town and the river Murray, at about eight miles from the former, passes through *Lynedoch Valley*, an extensive and fertile tract, where there are two copper mines and a pretty hamlet. There is very little surface water; but a copious supply, of excellent quality, has been found attainable by digging five or six feet down in the centre of the valley. Lynedoch valley is bounded on the east by the *Barossa range*, as the beautiful country is termed, situated between

the river Light and the hills, called the Heranian range; those termed the Hawdon range and the Belvedere range, comprising an area of about 225 English square miles. This district is rich in metals, deposited close to the surface, and occasionally cropping out. It is watered partly by the Gawler and partly by the little river Rhine. One of its most picturesque and valuable tracts is Angas Park, the property of Mr. G. F. Angas, which is about seven miles long and four broad, with a deep siliceous soil, blackened by the abundance of vegetable matter. *Salem Valley* is a lovely spot: the flat of the valley, through which the Gawler flows, is from one to five miles broad, with undulating hills rising on either side. The thriving village of *Bethany*, inhabited by several hundred Germans, is situated at the foot of the Barossa range, as are also those of *Lobethal* and *Langmeil;* but the chief place in the district is *Angaston*, at *German Pass*, which is picturesquely situated at the head of a ravine, looking towards the Greenock hills, and possesses a considerable number of comfortable habitations, a good hotel, schools, and stores. Outside the town is an excellent place of worship, with a cemetery, enclosed by stone walls.

About twelve miles to the north-west of Angaston, close to the river Light, is the rich copper mine of Kapunda, the property of Captain Bagot and Mr. Dutton, from which the valuable muriate of copper, or atacamite, previously found only in South America, is procured. The cottages of the miners are built of stone, obtained from a hill of clay slate on the property, which, being more or less tinged with copper, gives them a peculiar appearance. A chapel, serving also as a school-house, has been erected, and the little hamlet wears a cheerful aspect. Before long, a township will probably be formed here. The river Light deserves remark, not only for the mineral wealth in its vicinity, but also for the thousands of acres of fertile soil ready for the plough, diversified by undulating hills, with here and there patches of open soil. The fertility of the numerous branch valleys which strike off from the main channel of the Light, on each side, is testified by Mr. Dutton from personal acquaintance, he having resided, for some time, at Anlaby, under Mount Waterloo.

On the Light river, and from thence northwards, the cultivation of the soil is not carried on, excepting by those settlers who grow corn for their own consumption; here, also, "the bush" may be said to commence, as all the country to the north, taking in the Wakefield, Hill, Broughton, and Hutt rivers, Crystal brook, &c., as far north as Mount Arden, is occupied by sheep and cattle farmers. In these districts there is no lack of the best soil, and in most of them, land already surveyed is open for selection to the newly arrived emigrant.* A remarkable feature in the extensive downs through portions of which the Wakefield flows, is the absence of trees; they are, nevertheless, well grassed, and covered with a profusion of orchideous plants. The Broughton river, which, as we have before seen, forms the northern boundary of Stanley county, and, consequently, of the territory of which we have been speaking, was crossed by Eyre in 33° 28′ S. lat. At that point its bed is of considerable width, and its channel occupied by long, wide, and very deep water holes, connected with one another by a strongly running stream, which seldom or never fails, even in the driest season. The soil upon its banks, however, is described as not valuable, being generally stony and barren, bearing a sort of prickly grass (spinifex). Wild-fowl abound in its pools.

In the eastern portion of Stanley county is the famous Burra-Burra mine, situated on the Burra creek, about eighty-five miles in a direct line from Adelaide. The ores lie in the same direction as the ranges in which they are placed. Captain Sturt makes the following mention of this immense mine:— "The deposits of iron are greater than those of copper, and it is impossible to describe the appearance of the huge clean masses of which they are composed. They look, indeed, like immense blocks that had only just passed from the forge. The deposits at the Burra-Burra amounted, I believe, to some thousand tons, and led to the impression, that where so great a quantity of surface ore existed, but little would be found beneath. In working this gigantic mine, however, it has proved otherwise. I was informed by one of the shareholders, that it took three hours and three-quarters to go through the shafts and galleries of the mine. Some of the latter are cut through solid blocks of ore, which glitter like gold where the hammer or chisel has struck the rock, as you pass with a candle among them." Statistical information respecting

* *South Australia and its Mines*, by Francis Dutton. 1846.

this extraordinary mine is given elsewhere.

The greater part of Eyre county is occupied by "the dark and gloomy sea of scrub" previously adverted to as the Murray Belt, here about twenty miles wide; the hilly country immediately to the westward of it, is of an inferior description, portions only being occupied as sheep stations. A dray-road has been formed through the scrub, communicating with the government station of Moorundi, distant twenty-six miles from the Great Bend of the Murray, and ninety from Adelaide. It was established by Governor Grey, in 1841, in consequence of the collisions, too frequently attended with loss of life and great destruction of property, which were constantly occurring between the settlers coming overland with stock from New South Wales, and the natives. So deep a spirit of revenge had thereby become kindled in the breasts of the latter, that although suffering severely from every contest, they would not allow any party with stock to pass along the line of the river, without attempting to stop their progress. The appointment of Mr. Eyre as resident magistrate and protector of the aborigines, was most judicious, from his proved humanity, and the influence he had acquired over the natives. By his exertions, aided by the occasional distribution of a limited supply of blankets and flour among the aborigines, their good-will has been obtained, and the banks of the Murray, no longer the scene of conflict and slaughter, are now occupied by stock stations; while in calm weather, the natives, in their canoes of bark, are constantly upon its waters, busily employed in striking fish.

Mr. Eyre, now lieutenant-governor of New Zealand, has been succeeded at Moorundi by Mr. Scott, whose influence appears to equal that of his predecessor.

To the south of the county of Eyre lie the counties of Sturt, Hindmarsh, and Russell.

Sturt County, bounded on the south and east by the Russell county, as high as its termination in about 34° 50′ S. lat., and thence by the Murray (including the thirty-nine sections), to the parallel of about 34° 32′ due east of the dividing ridge between the Gawler and the Rhine, a line between which points forms its northern limits; on the west by the counties of Adelaide and Hindmarsh.

Hindmarsh County, bounded by the coast-line from the termination of the main range in St. Vincent's gulf below Mount Terrible, round Cape Jervis, to the sea outlet of the Murray; thence by the south-east shore of Mundo Island, in Lake Victoria, to Point Sturt, on the northern shore of the lake; thence by a direct line across the lake to the mouth of the Bremer; thence by that river up to the crossing-place of the eastern road, above Langhorne's station; thence, taking a line about N. 20° W., till it strikes the main range at Mount Barker, continuing along the eastern range (enclosing the Mount Barker survey), to Mount Magnificent; thence by a course about north-west, to the top of the Willunga range, where it is crossed by the southern road, and following the ridge to the sea below Mount Terrible.

Russell County, bounded by the coast-line from the sea outlet of the Murray, to a spot opposite where the Salt creek empties itself into the Coorong; by this creek, to the rocky ridge at its source, and thence by taking a line due north, till it cuts the Murray, in about 34° 50′ S. lat., bounded on the north and west by the Murray, as far as Pomunda; thence by a straight line across Lake Victoria to Point Sturt.

Of the territory included in these three southern counties, the finest and most cultivated portion is comprised in the district which, taking its name from its distinguishing feature, is called *Mount Barker*. This mountain, with its saddle-backed summit, is a very conspicuous object, visible for many leagues in the interior, beyond the Murray; it forms a landmark for overland parties from New South Wales, by which they steer for the settled districts of South Australia. The district may be said to extend from the village of Nairne (before mentioned) to Strathalbyn, on the river Angas, the latter place being fifteen miles from the shores of Lake Victoria. It abounds in beautiful valleys which, though of limited extent, are level and clear; their soil is a rich alluvial deposit, and the plough may be driven from one end to the other, without meeting a single obstacle to stop its progress. The trees are grouped as if by the hand of art. All British grains and fruits are climatized here — and apples, strawberries, and other fruits, which do not thrive well upon the plains, grow luxuriantly at Mount Barker, while upon the sunny low lands, all the fruits of the Mediterranean are produced in abundance. Besides much fine agricultural land, there is also

a considerable portion of good pasturage; but there are, nevertheless, many stony ranges entirely useless, even to stock.*

Mount Barker, the county-town of the district, contains a court-house, where a bench of magistrates sit once a week; a police-station, a post-office, a school-house, steam flour-mill, an inn, and some respectable private dwelling-places. The German village of *Hahndorf*, before named as situated on the confines of Adelaide county, belongs to this district, as does also the township of *Macclesfield*, situated on the river Angas. This stream has its source in some clear bubbling springs near the township, that gush up from the earth, shaded by mimosa trees, supplying a constantly running brook of the purest water. Macclesfield is, at present, a pretty little village; the white cottages and tents of its settlers, intermingled with corn-fields and gardens, and groups of cattle reposing under the shade of the gum-trees, bespeaking the nucleus of the future town.† Its native name is Kangooarinilla, signifying "the place for kangaroos and water."

To the east of the Mount Barker district a flat country, with a poor and sandy soil, extends to the Murray belt, beyond which, on the direct road to Mount Gambier and Rivoli bay, and fifteen miles below Moorundi, is the site of the township of Wellington, as yet only a station for the mounted police. A ferry has been established here across the Murray, which enters Lake Alexandrina, about half-a-dozen miles from this point.

"The country immediately to the eastward of the Murray affords, in some places, a scanty supply of grass for sheep; but, generally speaking, it is similar in its soil and rock formation, and consequently, in its productions, to the scrubby country to the westward."‡

Many parts of the shores of Lake Victoria are composed of rich land, but in others they are very bleak and desolate. The ground on the eastern side of the lake is a sand flat, gradually improving to the southward; where the shore begins to trend to the westward, it becomes very good. The rising ground behind, though sandy, affords excellent back-runs for cattle, and the hills are well timbered. Along the eastern and southern shores of Lake Albert, the same character of country continues, but the soil appears to be still better, and the flats become more extensive. Mr. Frome states, in his report, that he considers that there are, at least, 50,000 acres of good agricultural soil on the borders of the latter lake.

The *District of Encounter Bay* lies between the abrupt cape called Rosetta head and the sea-mouth of the Murray. It consists of several beautiful valleys, covered with luxuriant grass, and backed by the ranges of hills which, opposite Encounter bay, occupy nearly the centre of the promontory, forming a division between the eastern and western waters, which is marked by a considerable breadth of stringy bark forest. The settlers here are numerous, and the whale-fishery is carried on with considerable success.

Currency Creek and *Finniss River* empty themselves into the Goolwa, as the lagoon is called connected with Lake Victoria, to the eastward; the valley of the former stream is prettily wooded and grassy, but contains no very great extent of good land. To the north and south it is bounded by barren scrub. Near the head of the creek is a great sandy basin, which forms a striking contrast to the fertile valleys in its vicinity, and is, in itself, a remarkable physical feature. At an elevation of between 600 and 700 feet, this basin is surrounded by rugged stony hills, excepting to the south and the south-east, in which directions it falls into the valley of the Hindmarsh and Currency creek, respectively. *Mount Magnificent*, *Mount Compass*, and *Mount Jagged*, rise in isolated groups in different parts of this basin, the soil of which is pure sand; the surface undulating, and in many parts covered with stunted banksias. The Finniss rises behind Mount Magnificent, and is joined by a smaller branch from Mount Compass, as it flows from the eastward.

To the north-east of Hindmarsh river, lies the narrow but beautiful valley of the *Myponga*, between which and Mount Terrible, the country is poor and scrubby. *Aldinga Plains* (to the north of the Myponga,) are sufficiently extensive to feed numerous sheep; but are at present unused, from their deficiency of surface water. The little river *Yankalilla* empties itself into Gulf St. Vincent, passing between hills of white sand, overgrown with an almost endless variety of dark evergreen shrubs and

* Captain Sturt's *Account of South Australia.*
† Angas' *Savage Life in Australia.*
‡ Captain Sturt.

salsolaecous plants; like the valley of the Myponga, that of the Yankalilla ranks among the most fair and fertile tracts in the colony; the country between them is exceedingly romantic, becoming more broken and mountainous towards Rapid bay, a short distance from whence is the valuable lead mine of Yattagolingay.

Before leaving this portion of South Australia, it may be noticed, that from Cape Jervis, its south-east extremity, a practicable route for wheeled vehicles has been repeatedly traced to a good and available country twenty miles beyond *Mount Remarkable,* in the north, equal in lineal distance to the space of country between the eastern boundary of Cornwall and the eastern boundary of Middlesex, and containing, it is believed, as large a proportion of available land in a given breadth, as was comprised in that division of England while yet in a state of nature.

Partially located and unsettled Districts.—The extremity of the Eyria peninsula, situated between Spencer's gulf and the Great Australian bight, comprises,

Flinders County, which is bounded on the south by the coast between Capes Wiles and Cape Catastrophe; on the east, by the coast from Cape Catastrophe to the northern extremity of Louth bay, including all the islands on the coast between these parallels, as well as William's and the Gambier island; the northern and western limits are still undetermined.

The settlement at Port Lincoln is the only one, not merely in Flinders county, but in the whole province westward of Spencer's gulf. The character of the neighbouring country, and the future prospects of the township, have been differently viewed by several explorers; some contending that the territory around is worthless, others that there are large fertile tracts. Unless, however, a district be thinly wooded, and explorable by navigable rivers, it is almost impossible to form an accurate opinion.

According to Lieutenant-colonel Gawler, whose geographical and geological observations are extremely valuable, the surface of the Eyria peninsula, which is nearly an equilateral triangle of 200 miles on each side, is divided into three great portions:—(1) the *mountainous table-land tract;* (2) the *low undulating country;* and (3) the *hill country.* The first has been noted at p. 660. The many short and narrow mountain ridges, which rise from 300 to 700 feet above the plateau, in much confusion, but with the prevailing direction towards Spencer's gulf, are generally grassy and sprinkled with small casuarina trees; the water-courses between these ridges are occasionally lined with casuarina, and with pines twenty-five to thirty feet in height; the great outer slopes of the table-land are also frequently grassy; but the small plains between the bases of the ridges and the water-courses are almost always covered with brush, scrub, or heath, generally the latter.

The herbage is of the description known as kangaroo grass, but more commonly of the same slender sort as is seen on the plains between Adelaide and the sea. The soil which bears the grass is a red ferruginous sandy loam, much of it appearing rich of its kind, and available for agricultural or horticultural purposes.

The *low undulating country* forming the tongue of the peninsula consists of gentle elevations, not more than 300 feet above the sea, and is said to be a poor region. A scarcely varying and nearly flat belt of brush, scrub, and heath, seven to fifteen miles wide, extends along the sea-coast to the base of the mountain table-land, whose drainage passes through this tract. Several salt lagoons, frequently dry and clothed with fine groves of the "salt-water tea tree," are found in this district.

The *Hill Country,* elevated 600 to 1,000 feet in height, commences in about 34° 10′ S. lat., and has its common courses to north-east and south-west, with strong deviations to north-west and south-east. In the northerly subdivision of these ridges, *i.e.*, from the "Sheep hills," in 34° 11′ to "Northside hill," a direct distance of forty miles, the country is extensively covered with good grass; towards Cape Catastrophe, a similar country, though in a more limited proportion, extends. The Hill country contains many fine valleys, one named the *Tod* is sixteen miles in length, and has numerous lateral branches. Another, six or eight miles to the west of Boston bay, is a succession of broad swamps, some of which are now available for agriculture, as the soil in these valleys is of excellent quality. In the hill ranges there is a considerable quantity of permanent surface-water, the grassy hills and valleys are sprinkled with fine casuarinas, and the scenery is very beautiful.

Captain Hawson ascended the Hill country from the *Happy Valley* in a northerly direction for fifteen miles to the confluence of the

Tod and *Severn* rivers, about five miles west-north-west of Mount Gawler (twenty-one miles distant from Boston bay.) During the whole of this journey, he passed over a very fine sheep country, the hills being covered to their summits with grass. The explorer reached *Cowan's Vale* and *lake*, (part of Steven's river,) about twenty miles north-north-west of the Happy valley. "Nothing," he says, "can be imagined more beautiful than the country about this vale (which is about five miles long by one broad); the grass in the flats being abundant, and growing to a great height." *Smith's Valley*, eight miles distant in the same direction, is equally rich, and contains many thousand acres of excellent land fit for agricultural purposes. The hills in every direction are adapted for pasturage, and abundantly supplied with water the whole year round. During this journey of fifty miles the travellers were never two hours without water, and did not meet with five miles of unavailable land. When at the greatest distance from the Happy valley the country, as far as the eye could reach, appeared to be of a similar character. The opinion of Mr. Robert Tod, of the country to the north and west of Port Lincoln, is equally favourable; he says the majority of the hills, even during the dry season, afford good sheep pasture, while the valleys appear to be adapted for agricultural purposes.

Major O'Halloran and a party of police made two excursions, one of eighty-five miles to the north-east, and the other of fifty-five miles to the north-west of Port Lincoln. He reported the country to be well watered, covered with luxuriant herbage, abounding in game, and with numerous natives. Angas, writing in 1846, says that about thirty miles to the north and west of Port Lincoln, there is a rich and beautiful country, as yet but little known, having several fine lakes of water, and luxuriant pasture land, scattered with park-like trees; beyond these lakes rise two distinct ranges of lofty and abrupt hills. Waungerri is the native name for the largest lake, which abounds in black swans and other water-fowl; kangaroos, emus, and a variety of smaller game are still numerous in the surrounding country, which is unoccupied by settlers.

These opinions of disinterested eye-witnesses fully redeem Flinders county and the Port Lincoln neighbourhood from the imputation of barrenness; there are now from 70,000 to 100,000 sheep in this district, and a practicable line of route having been discovered from Adelaide along the western shore of Spencer's gulf, the value of landed property will most probably increase; the more so, if, as reported, good copper ore be also found in this part of the colony, which has already commenced shipping wool and tallow direct from Boston bay to England.

Mr. Eyre crossed the country in a direction nearly due east from Streaky bay towards Mount Arden, September 18, 1839. The first part consisted of alternations of brush, of open grassy plains, and high scrubby and sand ridges, interspersed with hard limestone flats, to the base of the Gawler range (see page 660), whence the route was through a perfect desert, very scrubby and stony, with much prickly grass growing upon the sand ridges. The hills seen were without either timber or shrubs, and very barren, with their front slopes exceedingly steep, and covered by small loose stones; several salt lakes were seen in various directions, but no indications of fresh-water or springs. Ridge behind ridge appeared to rise to the north-west, increasing in elevation. Further east the view from a hill showed to the north one vast sea of level scrub, and in the midst of it a lake. The journey to the head of Spencer's gulf was performed with much difficulty; Eyre says, "there were no water-courses, and no timber—all is barren, rocky, and naked in the extreme." It appears to me probable that the Gawler range extends continuously to the north-west, and that a good country may be found on the northern sides of the range at a distance of fifty to 100 miles inland from the Great Bight, improving as it approaches the districts of Western Australia.

Yorke Peninsula has only been partially examined; so far as is known, the shore is generally low, with several sandy beaches, on which may be seen ironstone, granite, whinstone, and quartz. The land, as seen near Point Pearce, rises gradually from the coast towards the centre of the peninsula, and consists of open plain, with occasional belts of forest. This description of country appears to exist as far as the eye can see, north or south. The soil is light, of a loamy nature, and well covered with fine grasses. Fresh water has been discovered in several places. The scrub and pine brush

are in belts, but not dense.* The water shed appears to be westerly. It is premature to decide as to the pastoral or agricultural capabilities of the peninsula, or as to its mineral resources. The geographical position is good; with navigable gulfs and harbours on either side, and possessing a temperate climate, it will doubtless attract attention as the population and wealth of the province increase.

The country to the eastward of the head of Spencer's gulf, and north of Stanley county, has not been well explored: the district about Mount Remarkable is said to be exceedingly picturesque and good, and possessed of considerable mineral advantages. A special survey of 20,000 acres has been taken by a company, for the express purpose of working any lodes that might be found. After passing the Mount Remarkable range, the aspect of the land deteriorates, and continues falling off towards the dreary region which extends round the head of the gulf, and towards Lake Torrens.

With regard to the country eastward of the high land, extending north from Mount Bryan, as far as Mount Hopeless, a distance of 300 miles, as far as the meridian of 141°, and probably beyond it, the result of several investigations shows, that there is no land available for either agricultural or pastoral purposes; and in the unbiassed opinion of Captain Frome, of the Royal Engineers, though there may be occasional spots of good land at the base of the main range, on the sources of the numerous creeks flowing from thence towards the inland desert, these must be too limited in extent to be of any present value.

Two recently-formed, but important counties, yet remain to be noticed, situated in the south-eastern portion of the colony, viz. :—

Robe County, bounded on the north by the parallel of 36° 54′ S. lat., extending from the sea-coast to where it intersects the 141st meridian; on the east by the said meridian; on the south by the northern boundary of Grey county; and on the south-west and west by the sea-coast.

Grey County, bounded on the east by the meridian of 141° from the sea-coast, to where it is intersected by the parallel of 37° 20′ south; on the north by the said parallel, from its intersection with the 141st meridian, to the sea-coast; on the south-west and south by the sea-coast. In Robe county a township has been laid out on Guichen bay, and one in Grey county, on Rivoli bay. Governor Grey, accompanied by Mr. Deputy-surveyor Burr, explored the territory now comprised in these counties in 1844. From the statement of these gentlemen we learn, that an almost uninterrupted tract of good country stretches between the rivers Murray and Glenelg, which, in some places, thins off to a narrow belt; in others, widens out to a very considerable extent; and towards the boundaries of Victoria province forms one of the most extensive and continuous tracts of good country which is known to exist within the limits of South Australia. The general features of this line of country may be briefly stated. From the neck of the peninsula which separates the Coorong from Lake Albert, to the Salt creek, or Bonney's creek, there is a belt of grassy casuarina hills, with numerous plains of good soil, in which water may be obtained within a few feet of the surface. This belt is bordered on the north-east by desert country, on the south-west by the Coorong. From Bonney's creek to the crossing of the Coorong, a distance of about thirty-five miles, the road passes generally amongst a succession of salt swamps and low scrubby hills. About two miles north of this road, and following a direction nearly parallel to it, is the low range, named Wambat range, behind which there is an extensive fresh-water swamp, several miles across, which appears to be subject to annual inundations. The soil on this swamp is similar to that on the flats of the Murray; in it are many grassy hills, which have the appearance of islands. Beyond the swamp, to the north and north-east, there are a succession of ranges which do not, from a distance, look very promising. From the crossing of the Coorong to Cape Bernouilli the country improves; from Cape Bernouilli to Guichen Bay, and for some distance around Mount Benson, and to Lake Hawdon, there is a useful tract of country. There are several ridges of high land, separated by low level ground, a great portion of which is subject to inundation; but the soil is excellent; and some of these plains have been sufficiently raised by volcanic action, to render them dry and available for pasturage or agriculture. Around Rivoli bay there is much good land and picturesque scenery; from thence to Mounts Schanck and Gambier (see p. 661), the country is, for the most part, of the richest description,

* Report of Mr. Hughes.

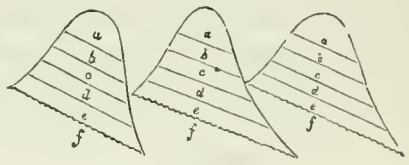
the soil of a dark brown loam. The trees grow luxuriantly; the blackwood attains an extraordinary size; beside which, there are several trees quite different from those of Adelaide. The Tatiara country, once so celebrated for the ferocity and cannibalism of its inhabitants, is now occupied by settlers, who have of late crossed the Murray, in considerable numbers, to form stations there. Between the land bordering the left bank of the Murray, and that contiguous to the sea-coast, there remains a considerable extent still to be explored, before any decided opinion can be formed as to its character.

The following are the sailing distances, in nautical miles, from Adelaide:—England, 11,500; Cape of Good Hope, 6,000; Ceylon, 4,500; Mauritius, 4,400; Timor, 2,700; Java, 2,650; Melbourne (Port Phillip), 450; Sydney (New South Wales), 1,134; Freemantle (Western Australia), 1,400 miles.

Geology.—There has evidently been, in this portion of Australia, a subterranean movement of great power, which, finding no vent in the northern district, in the vicinity of Mount Arden, pursued a southerly course, where it met less resistance, and by successive upheavings tore up the superincumbent strata, and raised to a considerable elevation a belt or zone of rocks, flanked by similar and parallel ridges. The dip of the strata composing the mountain range of South Australia, from 32° to 36° S. lat., so far as has been observed, is generally to the southward; the exception to this declination is probably attributable to the existence of rocks of igneous origin, such as granite, sienite, greenstone, &c. The rocks, of which the main range is composed, belong to the oldest of the primary strata; they are, so far as known, totally devoid of any evidence of the existence of animal or vegetable life during their formation; but the rocks on the plains teem with fossil remains, many of which belong to species identical with, or nearly allied to, the species now existing in the adjacent seas. The primary or sedimentary rocks of the mountain range have manifestly been forced out of an horizontal position by subterranean action; but the strata composing the plains which rest upon the sedimentary rocks are perfectly horizontal, and have, therefore, evidently not been subjected to the influence of the upheaving power.

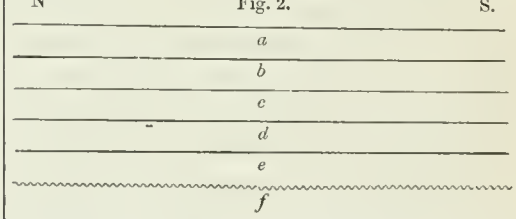
Near Mount Arden, the indications of volcanic agency are more manifest than at the portions of this range farther south; and in the same latitude as Mount Arden, to the eastward, Captain Frome, of the royal engineers, noticed basaltic rocks, thermal springs, and what appeared to be the crater of an extinct volcano. It appears to me that the axis of perturbation was to the south-east, and that the pent-up gases found, or rather forced, an exit in numerous small volcanoes, of which the craters are still to be seen in the province of Victoria, on the line of country extending from Lake Hindmarsh to the basin of Port Phillip. The manner in which the Adelaide range was raised from the bed of the ocean, is explained by the following diagrams, prepared by Mr. Burr, who has given much attention to this interesting subject:—

N. Fig. 1. S.



"This section exhibits a regular succession of strata of the same mineralogical character, and lying in the same order. The arrangement might be conceived to arise from a uniform and powerful subterranean action on strata, which had formerly been horizontal, and placed above one another in the following order:—

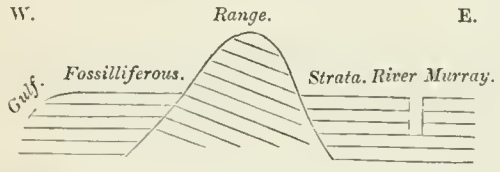
N Fig. 2. S.



Where *a*, *b*, *c*, *d*, and *e*, represent strata of sedimentary rocks, which were originally deposited on the unstratified rocks, *f*. For it is evident, that in order to produce the effect exhibited in Figure 1, we have only to propel a force, having a tendency to rise upwards, from the north to the south, when the horizontal strata in figure 2 would be thrown into a position similar to that exhibited in figure 1, which represents, in a general manner, the arrangement of the strata composing the principal range of South Australia. In this figure, *a* represents a quartzose sandstone traversed by veins of quartz, frequently accompanied with ironstone; *b*, a coarse dark-coloured slate, with veins of quartz, and occasionally of laminated specular iron; *c*, limestone beds, frequently very impure, and passing into slate and slaty sandstone. In this there are frequently veins of calcareous and other spars, with quartz, and ores of the metals, iron, copper, lead, &c., &c.; *d*, mica slate, chlorite slate, hornblende slate, passing upwards into sandy slates, and thence frequently into sandstone. This strata is also metalliferous, and contains veins

of hornstone, in which are calcedony, opal, agate, cornelian, and jasper of varieties, especially near its junction with the strata immediately above it; *e*, gneiss, which is metalliferous, and frequently contains garnets; *f*. granite, and other igneous rocks."

The thickness of the strata varies much in different places, but the exact extent has not yet been ascertained. The arrangement above given is subject to variations arising from local causes. In all probability the east and west faces of the Adelaide range were covered by the ocean, long after the force which raised the mountains had ceased to operate in that direction. Mr. Burr is of opinion that the successive deposits accumulated at the foot of the range were, at no distant geological period, raised, from being the bed of the ocean, to the position of dry land, by an intense and deeply-seated upheaving force, which, by degrees, and in an uniform manner, raised the fossiliferous strata to their present level; and that this force was exerted in a direction from west to east, as explained in the following diagram:—



In support of this opinion, of a positive, or at least comparative period of repose, it is noticed that the embonchures of the ravines, close under the range, have all the appearance of having once formed a sea beach. Mr. Burr adds, that "the fossiliferous strata are composed of a succession of horizontal layers of limestone, of greater or less purity, but generally containing a large proportion of sand, especially the lower beds which have been exposed to view, some of which are indurated sandstone, good for building, containing, when compared with the upper beds, but few fossil remains. These rocks are nearly white, or of a cream colour. The fossiliferous strata, which are considered to belong to the tertiary period, are generally covered with a deposit of soil and limestone, that does not contain any visible organic remains. This may have arisen from a gradual shallowing of the water by the rising of the land; for the tides and current in shallow water, would be more destructive to the remains of animals, than if they were deposited in mud in water of a greater depth. The surface soil, consequently, is such as might be supposed to arise by the drying of an impalpable mud, formed of attrited shells and other matter, which had been subjected to the action of the tides in shoal water. The strata composing the tertiary formation contain beds of the sulphate of lime (gypsum), the nitrate of potassa, and bitumen."

The gypsum found is rather a sandstone, containing a sulphate of lime, formed by shells and other calcareous matter, which, from its affinity for the sulphuric acid contained in sea-water, and disengaged perhaps by extreme heat, or other agency, united to the lime, and left the silica nearly pure. Mr. Burr accounts for the nitrate of potassa, which is found in an efflorescent state on the surface of the rocks, by supposing that the potassa contained in the rocks united with the nitrogen of the atmosphere in hot and dry weather; and the bitumen from the decomposition of water by animal and vegetable matter.

The vast fossil bed which extends from about the meridian of 139°, with an imperfectly-known width, towards the western boundary of the province, and from the sea-mouth of the Murray to 32° 40′ S. lat., indicates that a large extent of South Australia was, not long since, submerged. The strata are horizontal, surface level or slightly undulated, and the greatest elevation about 400 feet above the level of the sea. The upper stratum consists of beds of common oysters and oyster-shells, unbroken, three to four feet in thickness. Below this stratum there are deeper beds, of mixed coral, echini, pectoris, spiralis, and other small marine shells, generally much broken, and deposited in sand, limestone, and selenite, alternating with beds of sand without shells. At the base of these, or beneath them, are vestiges of fish, teeth, and nautili, four or five inches in diameter. Beds of excellent compact limestone occur sometimes in the fossil formation.

During the process of sinking wells at Adelaide, beds of oyster-shells, very perfect, were found forty feet below the surface; that is, seventy to ninety feet above the present ocean level.

Mr. Menge is of opinion that the terrace which occupies an undulated plain between the Barossa and Rawdon ranges, in some places about ten miles in breadth, has been caused by a pseudo-volcanic agency; that is, by hot springs: but, he adds—

"The hornstone within the Barossa range has nothing similar to it in Europe, where it is usually a

combination of quartz and felspar; whilst the South Australian hornstone combines quartz, magnesia, and lime, which produce a variety of siliceous minerals of which I have never seen anything alike. The rock itself turns not merely round its own character in different shapes and colours, but it includes, at the same place, jasper, cornelian, chalcedony, opal, woodstone, and siliceous tuffa, altogether more or less varied by accidental ingredients of iron, magnesia, and lime. Common jasper and opal jasper form strata and veins in hornstone, and occupy sometimes the whole place of the rock. Chalcedony and opal occur in veins, which are very numerous, and both are botryoidal where pores and caves occur in the veins, without the least disposition to crystallization. Crystallized substances, besides sulphuret of iron, seem to be combinations of magnesia and lime; as bidderspar, rheticite, grammatite, &c. Silver-white foliated talc spreads through the whole rock, but seldom through chalcedony, and very frequently through opal and siliceous tuffa. The last is sometimes perfectly like that from the Geysers, in Iceland. There are two different series of siliceous tuffa: the first is quartz, and begins with porous hornstone or chalcedony, and ends in a spongy mass, like pumice; the other is in connexion with opal, takes the shape of siliceous ghur or hydrophan, and ends in a kind of freestone. Opal occurs in great abundance, partly as milk opal, partly as wax opal, fire opal, common opal, semi opal, and precious opal. The fibres of asbestos, which run frequently through the opal, give it a chatoyant lustre, and the enclosed talc looks exactly like silver in the mass. Veins of opal run in almost every direction through the hornstone, as well as through siliceous tuffa, without regular stratification; and if they be once opened, we shall have precious stones in great abundance. Red and blue striped opal-agate appears sometimes on the surface with dendritic manganese, which seems to form a vein in the interior; but it is red and yellow opal jasper which occupies often the places of hornstone, or forms regular strata in it.

"The veins of chalcedony run partly through a compact hornstone, partly through porous hornstone, and partly through woodstone or fibrous hornstone, and sometimes through wood asbestos or rock wood. It forms a kind of oynx with woodstone and with opal in zones, and is generally blue, bluish-white, or yellow, and forms a transition, through a red colour, into cornelian. The milk-white chalcedony, with enclosed fibres of asbestos, forms the cat's-eye, which is of frequent occurrence in Amianth-place, as well as in Flaxman-valley."

This peculiar formation is frequently interrupted by strata and beds of magnetic iron ore and white marble, or magnesian limestone; and it seems to be cut off by a formation of porphyry in the Hernanion range.

Primitive limestone (white marble) is found in great abundance in the mountains east of Gulf St. Vincent. Mr. Menge met with fifteen hills of it within the Barossa range, along the formations of hornstone, magnetic iron ore, and talc, or of magnesian rocks. Some has been found as fine-grained as that of the celebrated Carara in Italy. On *Cornflower hill*, the *table marble* is easily separated into flags of any size. In Flaxman valley, the primitive limestone abounds with magnetic iron ore. The western slope of the Barossa range, along the Angas Park, from Light Pass to Salem valley, is entirely white marble. Even the springs which irrigate German Pass are impregnated with carbonate of lime. Within the Belvedere range there are several strata of transition limestone. The limestone on the plains is full of shells in a petrified state, and was formed from the ocean; that on the tops of hills seems to have had its origin from the primitive limestone usually deposited on elevations, along with a breccia of quartz pebbles connected by bog iron ore, as the superstratum on the primitive slates.

The tertiary limestone seems to be spread over a large part of the southern and eastern coasts of Australia; not merely through its plains, and around its shores, but also on its elevations. These different formations of lime indicate abundance of minerals.

Mr. Menge, who has geologically examined the Uralian mountains, and seen there lumps of malachite, or carbonate of copper, weighing more than a ton each (found between primitive limestone and clay slate), and lumps of gold 20 to 25 lbs. weight each (found between primitive limestone and mica slate), is of opinion that the corresponding strata in Australia will yield equally valuable products.

The lower slopes of all the mountain ranges are chiefly composed of slate; in the Mount Lofty range, generally *transition*, very much resembling the *greywacke* of North Wales. Proceeding to the east or southward, it becomes harder, and of a red colour; and still farther to the south, it appears as *flinty*, *mica*, or *hornblende* slate. The surface of earth on the slate is always grassy. The summit of Mount Lofty is capped with highly ferruginous sandstone; and the Mount Barker range exhibits a conglomerate of ironstone and angular pieces of quartz. The ferruginous sandstone and ironstone conglomerate is marked by stringy bark forest or brush.

Throughout the Adelaide range, says Mr. Dutton, granite shews itself in different places, principally in the beds of rivers, or at the bottom of deep gullies; sometimes also forming some of the high peaks, as in the Barossa range. Other heights are capped with the old red standstone; and a recent oolitic limestone covers the clay slate of

many of the lower hills. The rock formations of this main range are, generally speaking, the same throughout. The stratified primitive rocks on each side of both the gulfs St. Vincent and Spencer begin from Cape Jervis, and extend to the northward for about 200 miles: they are generally, according to Mr. Menge, accompanied by a formation of gneiss on one side, and another of clay slate on the other side. The gneiss is frequently interlined with extensive banks or strata of granite, which often run out into pure quartz; and the clay slate occurs in all its modifications in colour and mixture.

On the *Mount Remarkable* range, the prevailing rock is a very hard white sandstone; and on the west coast, a coarse red sandstone prevails. Governor Grey, who examined this district, was of opinion that the range of mountains as far as Mount Arden abounds in minerals.

The prevailing rock in the neighbourhood of Franklin harbour is gneiss, and the adjoining hills are probably full of minerals.

On the western side of the head of Spencer's gulf, the hills are of red sandstone, in strata nearly horizontal. In other countries this formation is associated with coal, which will most likely be found in this neighbourhood.

At Lipson cove, on the west coast of Spencer's gulf, the rocks observed by Colonel Robe, when governor of the colony, in December, 1846, consisted of gneiss and hornblende schist, nearly vertical, and having a due course north and south. At Port Lincoln, the Gambier islands, Althorpe island, and apparently the south-west extremity of Yorke's peninsula, the governor found stratified limestone of recent formation, horizontal, and similar to that of Adelaide, resting immediately on granite, without the interposition of the transition or other secondary rocks.

The country to the south and east of Lakes Victoria and Albert, as far as Cape Bernouilli, consists of domes of sand, which are supposed to rest on a granitic reef or barrier, as granitic rocks are visible above the sea at Capes Morad and Bernouilli, and at other points on the coast. It is, therefore, presumed to be continuous, although the connexion is not at present visible.

Further south, the sand hills cease; no granite, igneous, or hard rock appears; the coast-line is wider and less elevated, and there are numerous low swampy plains, subject to periodical inundations, and strewed with cakes of calcareous tufa, some as large, and closely resembling a ship biscuit.

The hills around the plains are of limestone, as are also the rocks of the surrounding country. In the vicinity of Mounts Gambier and Schanck, for about twenty miles, the geological features change, from tertiary limestone and calcareous sandstone, to coral limestone, with numerous beds of chert, a siliceous rock containing the remains of marine animals and coral. Throughout this coral limestone and level tract there are deep holes, or wells, containing fresh water, one of which, of an oval form, measured eighty yards in diameter; the depth to the surface of the water, twenty-eight feet and-a-half; and the depth of the water, 103½ feet; the colour of an intense indigo-blue. These wells are all in the immediate vicinity or within twelve miles of the volcanic mountains; and in the same neighbourhood are caverns containing the bones and teeth of animals of a larger size than any at present living in Australia. Some are supposed to belong to gigantic kangaroos, others to the canine race.

The descriptions of Mounts Gambier and Schanck have been given in the topography. At the base of Mount Schanck, to the south-west, there is a large accumulation of cellular basalt, which is bare, and presents a steep wall towards the plain. At Mount Gambier there is black and red lava, generally cellular; coral limestone is exhibited in the cliffs of the lake in the middle crater, and upon this there is a stratum of basalt; whilst on the upper parts of the mountain, or on the rims of the craters, there is volcanic tuff, containing fragments of lava.

Mineralogy.—The preceding details of the geological strata will serve to introduce a sketch of mineralogical combination discovered in South Australia. Mr. Menge, who was the first person to direct attention to the mineral riches of the province, says that a rock in Australia is not confined to a compound of earthy substances, as is generally the case in Europe, but that it is often identified with metals, minerals, precious or ornamental stone, or with some earthy substance fit for lithurgical use. He thus classifies them in South Australia according to their order as receptacles of mineral wealth:

1. *Granite*—composed of quartz, felspar, and mica. *Rocks* depending upon *granite*—porphyry, sienite, serpentine, and greenstone. *Minerals* depending upon *quartz*—

amethyst, chalcedony, chrysopras, and opal; ditto on *felspar*—Periklin, scapolithe, gawlerite, and topaz. Ditto on *mica*—talc, chlorite, plumbago, and ironrose. *Minerals inhabiting the rock of granite*—tourmaline (black and green), garnet, beryl or emerald, corundum, zircon. *Minerals in combination with granite rock*—usually (1) cobalt, with its associated metals, viz., bismuth, arsenic, silver, and antimony; (2) uranium; (3) tin, with its associated shelium or wolfram, molybdena, and zinc; (4) lead—with its associated silver and arsenic; (5) copper—associated with lead and copper.

Gneiss ranks second in order, and as it differs only from granite by its stratification (and in South Australia by the proportion of its constituent parts), similar metals and minerals are to be found as in granite, but the laminated structure leaves more room for them in gneiss. Where *quartz* predominates in gneiss, the rock attains considerable altitude. Where *felspar* is most abundant, a disintegration or decomposition takes place, and the metals, including the protoxides and peroxides of iron, are protruded on the surface; where *mica* is in excess, magnesia is produced, and by chemical combination indurated talc, usually called soapstone, appears. The Australian soapstone differs from the kind usually found in Europe; it resists the disintegrating powers of the atmosphere, becomes hard in the fire, and takes a polish similar to cast silver, which it retains, not being subject to tarnish.

Mica Slate ranks third in South Australia, and is very extensively distributed; it consists of quartz and mica, and wherever the quartz is not compact, but granular, the rock is easily dissolved, and becomes sand. The ores in this rock are chiefly iron-mica, specular iron, and brown iron ores.

Primitive Limestone, fourth in order, but first in importance because of its metallic riches, when combined with clay slate, contains copper, lead, and zinc; iron is found in nests, veins, stocks, and caves. When blended with quartz, it forms an excellent millstone.

Hornstone (a compact quartz), fifth, often accompanies primitive limestone, or clay slate, when it is found to contain considerable quantities of copper ores. In this formation are found many ornamental stones or quartzose substances; such as chalcedony, cornelian, jasper, opal, and hydrophane; also the amphibolic substances—asbestos and grammatite.

Clay Slate, the sixth and most extensive formation in South Australia, abounds in metals, particularly in iron, lead, silver, copper, manganese, gold, and zinc. The ores are mostly indicated by its stratified quartz. The colour of this formation is usually grey, but varying to white and to blue slate. Where the quartz predominates, it changes into siliceous slate or touchstone; where the clay is in excess, alum slate appears.

To the above general view of the rocks containing the metallic riches of South Australia, it may be useful to add a definition of some technical terms which it would have been scarcely possible to have avoided employing.

When speaking of minerals, miners distinguish the ores or lodes according to their situation in the metalliferous ranges; thus (1) *strata*, or stratified ores running parallel with the rock; (2) *veins* crossing rocks at different angles; (3) *stocks* filling vertical caves in the rocks; (4) *reins* and *nests* scattered in masses; (5) *labyrinths* in zigzag or curved lines; (6) *chains* in links and scattered, and (7) *vaults*, heaped up in horizontal caves within the rocks. Copper ores in this last-named position are usually found lying loose, or in distinct heaps, whilst the rock is dissolved around.

The mineral and geological specimens which have been discovered up to the year 1846, are thus classified; I give the list, as prepared by Mr. Burr, in evidence of the internal resources of the province:—

IRON.—*Sulphurets.*

Rapid Bay;—general in the ranges, in limestone, quartz, hornstone, slates, and associated with other metalliferous minerals.	Iron pyrites, crystallised in cubes and uncrystallised.
Montacute Copper Mine, and the metalliferous districts in its neighbourhood, Rapid Bay, Encounter Bay, &c.	Iron pyrites, crystallised in pentagonal dodecahedrons.

Oxides.

Mount Gawler Range, Barossa Range, Mount Lofty Range, very general.	Specular iron ore, massive, and lamellar, and granulated.
Near the Montacute Copper Mine.	Brown hœmatite, radiated and fibrous.
Rapid Bay, Mount Barker, near the Montacute, and various other places.	Brown hœmatite, compact.
Very general.	Bog iron ore, and other earthy oxides of iron.
Very general, from Cape Jervis to Black Rock Hill.	Magnetic iron ore, crystallised and massive, varieties.
Light River.	Sienite.

Carbonate.

Rapid Bay, Barossa Range, Mount Lofty Range, and various other places	Carbonate of iron.

Phosphate.

Near Mount Rufus, and near Strathalbyn.	Phosphate of iron, earthy.

MANGANESE—*Oxides.*

Rapid Bay, Myponga, the Horseshoe, Onkaparinga.	Black oxide of manganese, fibrous, diverging.
Rapid Bay, Light River, &c., &c.	Black oxide of manganese, massive.
Rapid Bay, Barossa Range, Mount Bryant, &c., &c.	Siliceous oxide of manganese.

EARTHY MINERALS—*Siliceous.*

Near Encounter Bay.	Quartz in dodecahedrons, with isosceles triangular faces.
In veins, generally amongst the metalliferous strata.	Quartz in hexagonal prisms with summits.
Near the Montacute Copper Mine, Flaxman's Valley.	Quartz in minute hexagonal prisms with summits.
Very general among the metalliferous strata; the cleanest specimens are from the neighbourhood of Mount Barker, the Barossa and Belvidere Ranges.	Quartz vein.
Belvidere Range.	Quartz vein, smoky.
Near the Montacute Copper Mine.	Quartz crystallised, rose-coloured.
On the Reach, at Rivoli Bay, at Mount Gambier.	Flint in nodules, black (not the chalk flint).
Barossa Range, Flaxman's Valley, twenty-five miles north-east of Adelaide.	Hornstone.
Flaxman's Valley.	Woodstone.
Flaxman's Valley.	Opal, brown, blue, milk white, wood, green, magnesian, brimstone-coloured, and other varieties, some with asbestos.
Belvidere Range.	Jasper opal.
Barossa and Belvidere Ranges.	Jasper, varieties.
Flaxman's Valley.	Chalcedony, blue.
Flaxman's Valley, and near Mount Barker.	Chalcedony, botryoidal.
Barossa Range.	Chalcedony, red, with opal.
Near the Kapunda Copper Mine.	Chalcedony, with jasper.
Flaxman's Valley.	Agate, red and blue striped, and moss.
Belvidere Range.	Prehnite, or zeolite, mammillated.
Barossa Range.	Prehnite, crystallised.
Belvidere Range, in the neighbourhood of Mount Barker.	Garnet, red.
About twenty miles north-east of Mount Barker.	Garnet, black (grenat noir).
Belvidere Range.	Cinnamon stone.
Mount Gambier.	Augite.
Mount Gambier.	Coccolite.
Belvidere Range, near Mount Barker, Flaxman's Valley, Encounter Bay, Strathalbyn, &c., &c.	Hornblende.
Flaxman's Valley, Barossa Range.	Grammatite, or tremolite, in limestone and in dolomite.
Lynedoch Valley, Flaxman's Valley.	Actynolite, green and brown, lamellar.
Flaxman's Valley.	Actynolite, green and brown, capillary.
Flaxman's Valley.	Actynolite, white.
Near Strathalbyn.	Actynolite, brown.
Belvidere Range.	Amianthus, or ashestos, flexible and common, occasionally traversing and woven through other minerals, as opal, hornstone spars, &c., &c.
Near Mount Barker.	Asbestos, with chalcedony, and siliceous tuffa.
Flaxman's Valley, and east of Mount Barker.	Rock wood.

Aluminous.

Barossa Range.	Fibrolite.
Belvidere Range.	Sappare, or kyanite, flowery, foliated, white and green.
River Gawler.	Clay, yellow, red, and white
Flaxman's Valley.	Clay, white, indurated.
South Adelaide.	Clay, variegated, unctuous.
Near Mount Barker.	Clay, variegated, red, white, and blue.
North Adelaide, 125 feet below the surface.	Pipe clay, red, white, and pink.
Gawler Plains.	Pipe clay, white.
Sources of the Angas.	Pipe-clay, white and pink.
Crystal Brook.	Clay, yellow and green.
North Adelaide, eighty feet below the surface.	Clay, blue, with iron pyrites.
Belvidere Range.	Alum slate and alum stone.
Near Mount Lofty.	Clay, green, indurated.
Mount Lofty Range.	Alum slate.

ALKALINE, EARTHY MINERALS—*Schorl, or Tourmaline, &c.*

Valley of the Nixon, near Encounter Bay.	Schorl, acicular.
Barossa Range.	Schorl, in nine-sided prisms with summits.
Encounter Bay.	Schorl, in prisms, with yellow mica.
Seven miles north-west of Mount Barker.	Schorl, black and green, in granite.
Barossa Range.	Schorl, black and green, in granite.
Near Rapid Bay, twenty-five miles north-east of Adelaide, and various places.	Schorl, varieties.
Valley of the Nixon.	Rubellite.
Barossa Range.	Beryl.
Barossa Range.	Epidote.

Talc.

Belvidere Range.	Earthy talc.
River Hutt, and twenty-five miles north-east of Adelaide.	Silver-white foliated talc.
Lynedoch Valley.	Indurated white, red, and yellow talc.
Twenty-five miles north-east of Adelaide.	Indurated red talc.
Barossa Range.	Green, foliated, indurated talc.
Mount Lofty Range.	Glanular talc, nacrite.
Belvidere Range.	Nacrite.

Mica.

River Gawler, twenty-five miles north-east of Adelaide, Valley of the Nixon, Barossa Range.	Mica, white, flowery.
Barossa Range, Valley of the Nixon.	Mica, black.
Barossa Range.	Iron mica.
Yankalilla.	White foliated mica, in large leaves

Felspar.

Barossa Range.	Felspar, foliated, glassy, and flesh-coloured.
East of Mount Barker.	Felspar, flesh-coloured.
East of Mount Barker.	Felspar, granular.

ACIDIFEROUS, EARTHY MINERALS.

Cliffs of the River Murray, and at Brighton, near Adelaide.	Sulphate of lime (gypsum). foliated.
Cliffs of the River Murray.	Sulphate of lime, in the form of shells.
Occasionally in small quantities, with ores of copper at the Kapunda Mine.	Fluate of lime, in cubes, with the edges and angles replaced.
Rapid Bay, Barossa Range, Belvidere Range.	Dolomite.
Barossa Range, Belvidere Range, Rapid Bay, near Mount Barker.	Bitter spar.
North-east of Adelaide, Rapid Bay.	Pearl spar.
Rapid Bay, Barossa Range.	Carara marble.
Rapid Bay, near Mount Barker, and ten miles north-east of Adelaide.	Marble, white, fine.

Ten miles north-east of Adelaide.	Marble, white and pink, fine.
Mount Barker, Rapid Bay.	Marble, white and grey.
Mount Barker, Rapid Bay.	Marble, grey.
Flinders' Range, Barossa Range, Mount Lofty Range, very general in creeks from the ranges where there is limestone.	Calcareous tuffa, cellular.
Depot Creek, near Mount Arden.	Calcareous tuffa, coralloidal.
Rapid Bay, Crystal Brook.	Calcareous tuffa, compact.
On plains at Lake Hawdon and Rivoli Bay.	Calcareous tuffa, in cakes.
On plains near Lake Hawdon.	Calcareous tuffa, in spherical balls.
On walls of wells near Mount Gambier.	Calcareous tuffa.
Near Rapid Bay, &c., &c.	Calcareous stalactites.
Barossa Range, Mount Barker	Siliceous tuffa.
River Gawler.	Wavellite, stellated.

ACIDIFEROUS, ALKALINE MINERALS.

Crystal Brook.	Glauber salts, or sulphate of soda, efflorescent.
In lakes near Lake Victoria.	Chloride of soda.
Cliffs of the River Murray.	Nitrate of potassa, efflorescent.

ACIDIFEROUS, ALKALINE, EARTHY MINERALS.

Mount Lofty Range, Barossa Range.	Carbonate of magnesia.
Gorge of the River Torrens, ranges near Mount Barker, &c.	Alum, mammillated and efflorescent.

COMBUSTIBLE OR INFLAMMABLE MINERALS.

Near the Montacute copper mine.	Sulphur, native, enclosed in vein quartz with iron pyrites.
Belvidere Range, and about twenty-three miles north-east of Adelaide.	Graphite, or plumbago.
Cliffs of the River Murray.	Bitumen.

GEOLOGICAL SPECIMENS—*Granite, Granitic Rocks, and Igneous Rocks.*

Valley of the Nixon, near Encounter Bay, Cap Morard de Galles. Granite rock near the head of the Coorong. Cape Jaffa Reef, Yankalilla, near Mount Barker; in the Murray Scrub, at various places, protruding through the tertiary strata.	Granite, coarse red.
Cape Jervis, Yankalilla; granite rock, near the head of the Coorong, near Mount Barker, Cap Morard de Galles, Rapid Bay.	Granite, fine red.
Cap Morard de Galles, in nodules, embedded in coarse red granite.	Granite, fine grey.
River Torrens, about twenty-five miles north-east of Adelaide.	Granite, graphic (binary).
River Torrens, about twenty-five miles north-east of Adelaide, Barossa Range.	Granite, coarse white, with schorl.
River Torrens, about twenty-five miles north-east of Adelaide.	Granite, fine white, with schorl
About three miles north of Cape Jervis.	Granite, white (binary).
Onkaparinga River, north-west of Mount Barker, Barossa Range.	Granite, binary, with black and green schorl.
North of Mount Barker.	Granite, fine and coarse, binary, white.
Flaxman's Valley, near Encounter Bay, east of Mount Barker.	Sienite.
Near Mount Arden.	Porphyry, red.
Barossa Range.	Porphyry, green.

Gneiss, Mica Slate, Hornblende Slate, &c., &c.

Lynedoch Valley, east of Mount Barker about six miles, Valley of the Nixon, near Encounter Bay, near Strathalbyn, River Torrens, about twelve miles north-east of Adelaide, Barossa Range, River Gawler, near Moorooro, North and South Rhines, and other localities, principally in those portions of the range which drain eastward towards the Murray River.	Gneiss.
To the east and south-east of Mount Barker.	Gneiss, passing into sandstone.
Near Mount Arden.	Mica slate, red and sandy.
River Bremer, near Mount Barker, Barossa Range, Yankalilla, Sources of the Angas, generally distributed, especially in those parts of the range which drain to the eastward towards the Murray River.	Mica slate.
Valley of the Nixon, twelve miles north-east of Adelaide, vicinity of Mount Barker.	Chlorite slate.
Barossa Range, Rapid Bay, about six miles south-east of Mount Barker.	Hornblende slate.

Argillaceous, Stratified Rocks.

Near Encounter Bay, near Mount Lofty, near Mount Arden, ten miles east of Mount Brown, Flinders Range, Mount Lofty Range, Brownhill Creek.	Grauwacke slate.
Willunga, near the Montacute Copper Mine, Rapid Bay, west of Mount Barker five miles, Cape Jervis, Kapunda Copper Mine, Horse-shoe, Onkaparinga, and country between that and Willunga, generally on the western slopes of the range.	Clay slates, various, some good roofing slates.
Flinders' Range, Mount Lofty Range, &c.	Flinty slate

Sandstones and Siliceous Rocks

At the base of Flinders' Range, to the westward, near Crystal Rock.	Quartz rock.
Between Rocky River and Crystal Brook.	Sandstone, fine white, granular.
About twelve miles north-east of Adelaide.	Sandstone, white, compact.
About four miles south-east of Mount Lofty.	Sandstone, red, micaceous.
Barossa Range, near the North Rhine.	Sandstone, slaty grey
Occur very generally in the ranges; they are frequently granular and ferruginous. There are quartzose sandstones, which are hard and good for buildings; some of the sandstones pass, by almost imperceptible gradations, into slate.	Sandstones, various.

Calcareous Rocks.

Barossa Range, Rapid Bay.	White marble, similar to Carara.
Near Mount Barker.	White marble, and veined white and grey.

About twelve miles north-east of Adelaide.	White marble, and veined white and pink.
River Hutt, Barossa Range, near Mount Barker, Rapid Bay.	White crystalline limestone, coarse-grained.
Rapid Bay.	White and grey slaty limestone.
Rapid Bay, near Mount Barker.	Grey limestone, compact.
Near Mount Arden.	Variegated compact limestone.
Near Mount Gambier.	Compact limestone.
Near Mount Gambier and Mount Schanck.	Coral limestone.
Plains near Cape Jaffa.	Compact limestone, with fossil remains of univalve shells.
Salt Creek.	Arenaceous limestone, with fossil remains of shells, partly bivalve.
Over the whole of the country described as tertiary and recent.	Fossil limestone.
Dunes of sand on the Coorong.	Calcareous sandstone, in flags.

The chief ores of some of the principal mines in South Australia, are stated to be as follows:—

Kapunda Copper Mine.—The best varieties of sulphurets, as vitreous copper or copper glance, purple copper ore, grey copper ore, the black sulphuret of copper, and the blue and green carbonate of copper, which are generally mixed with earthy matter. These have formed the principal ores which have been exported; but there has also been a considerable quantity of the muriate of copper, and native copper, crystallised in octahedrons.

Burra-Burra Copper Mine.—The protoxide of copper, or ruby copper ore, and carbonate of copper. The protoxide of copper is generally in veins, of greater or less thickness, traversing the oxide of iron; some of the mixed specimens from the Burra-Burra mine are exceedingly beautiful. A rich ferruginous, red oxide of copper has also been procured in considerable quantities. The sulphurets of copper are scarce.

Montacute Copper Mine.—Copper pyrites, generally variegated. Carbonate of copper is also met with, and some of the finest specimens of this ore have been from the Montacute mine.

Rapid Bay.—Ores of copper similar to those of the Montacute mine.

Mount Barker Copper Mine.—Ores a red oxide, containing a small portion of iron and silica, and the blue and green carbonate of copper, generally earthy.

Copper Mine about twenty miles north-east of Mount Barker.—A good kind of the sulphuret of copper, variegated.

Wakefield Copper Mine.—The carbonate of copper, with iron ore, and sulphate of barytes.

Glen Osmond Lead Mines.—The sulphurets, or galena, crystallised in cubes, and granular; and the corneous lead ore, a murio-carbonate of lead.

Rapid Bay.—Galena in cubes, and blue lead ore pulverulent.

Yorke Peninsula, between Gulfs St. Vincent and Spencer, is said to contain abundance of minerals; and in the district of Franklin harbour, 150 miles north of Port Lincoln, varieties of the blue and green carbonate of copper have been recently discovered.

The length and breadth of some of the lodes of copper in South Australia, surpass anything of the kind, even in South America; at the celebrated *Burra-Burra* mines, in particular (see map), the metal "crops out" of the surface in such quantities, that hundreds of tons may be removed without sinking a shaft; it resembles *quarrying* in metal, rather than mining. In one place, where a shaft has been sunk, it seems like working in a bed of solid copper.

Lead, in the same manner, especially at the *Wheal-Watkins* mine, has been found "cropping" through the surface; the ore of this mine sent to England, yielded seventy-five per cent. of lead, and about 30*s.* of silver to the ton of ore, which may be raised at the mine at less than 20*s.* per ton.

Several other minerals have been found, as well as copper and lead. Native gold, containing a small portion of silver, exists about half a mile north of the Montacute copper mine, ten miles north-east of Adelaide. It is also said to be obtainable in several other places. I have seen some fine grains of gold interspersed with black sand, said to have been found in the bed of the Torrens river. Further details will be given, when examining the staple products of the province.

The Soil, of course, varies throughout a wide extent of country; that on which the city of Adelaide is built is remarkable for containing in abundance the elements necessary for vegetable production. In North Adelaide every kind of English and tropical fruit may be found growing in perfection; the banana and the gooseberry side by side. The produce of the fruit-trees is no less abundant in quantity than rich in flavour: yet the appearance of the soil would scarcely indicate such a favourable return to the industry of man.

A portion of the surface soil, and of the subsoil, taken from the garden (which had not been manured) of Mr. George Stephenson, in North Adelaide, was brought to England by Mr. Dutton, and submitted to analysis by Dr. Ure (23rd of February, 1846), when the following results were produced:—*Surface soil*—Sulphate of lime, or gypsum, 75; phosphate of lime, 2; moisture, 2; combustible vegetable matter, 2; oxide and phosphate of iron, 6; fixed alkaline salts, containing some of the valuable potash salt (these are muriates of soda and potash), 4.5; silica and a little alumina, 8.5; a trace of magnesia; = 100. *Subsoil*—Sulphate of lime, 53.33;

phosphate of lime, 2; oxide and phosphate of iron, 5.50; moisture expelled at red heat, 15; fixed alkaline salts, 3.50; silica, with a little alumina, 20.67; a trace of magnesia; = 100. This distinguished chemist says, "I have devoted much time and pains to the analysis of the soils; they are the most singular I have ever examined, or even heard of: they must be very fertile, as they contain all the elements necessary for the nourishment of plants."

Dr. Ure examined samples of wheat and barley from Adelaide, and determined their value by the specific gravity of the corn, which he compared with English prize wheat, thus:—wheat from South Australia, specific gravity, 1.400; English prize wheat, 1.340; barley of Adelaide, 1.285. The nutritive quality of the soil of South Australia, as evinced in the growth of grain, is greater than that of England.

The extent of limestone formation in the colony would indicate an abundance of arable land; while the slate formation furnishes a great variety of pastoral districts. It is probable that, in future years, the amount of cultivable soil will be largely increased in Australia, by reason of diminished terrestrial heat, owing to the more rapid disintegration of calcareous rocks, cooling in the surface of the earth, a clearing of the indigenous forests, less immediate absorption of the periodical rains, and a greater retention of surface-water, indispensable in an Australian climate for pastoral and agricultural pursuits.

Climate.—South Australia, from its latitudinal position, absence of snow-clad mountains, and, as regards Adelaide, from its inland situation, has a higher temperature than Melbourne, and may be said to range more nearly with Sydney, New South Wales, with Perth in Western Australia, and with Palestine in Asia Minor. It is very salubrious; and, as the soil becomes more cultivated, will probably possess a more equable thermometrical range. The southerly winds, which prevail for the greater part of the year, arrive cool and refreshing from the Pacific, and have an exhilarating influence. During winter (June, July, and August) hoar-frosts occur at Adelaide. The atmosphere of South Australia is an excellent remedial agent for alleviating the diseases of Europe or of Asia.

The general temperature of Adelaide is somewhat higher than that of Perth, the capital of Swan River, as shown by the following abstract of observations of the thermometer of Fahrenheit, in the year 1844:—

Months.	Adelaide.		Perth.		Difference.	
	Max.	Min.	Max.	Min.	Max.	Min.
January . .	101	66	97	52	4	14
February . .	103½	64	100	67	3⅓	17
March . .	95	64	89	48	6	16
April . . .	86	53	87	35	1	18
May . . .	76	50	72	37	4	13
June . . .	68	48	65	30	3	18
July . . .	60⅓	48	61	31	0⅓	17
August . .	68	48	58	31	10	17
September .	70½	49	68	36	4½	13
October . .	96⅕	50	78	40	18⅕	10
November .	93⅕	53	92	40	1⅓	13
December .	103½	53	96	41	7½	12

The mean quantity of rain falling, throughout the year, in the following places, is—in Adelaide, 20 inches; Hobart Town, 19; London, 21; Manchester, 36; Liverpool, 34; Launceston, 40; Kendal, 53; Dumfries, 36; Glasgow, 21; Arracan, in July and August, 103; Tropics generally, 115; Bombay, 106; West of England, 57. Annual variation in London, 75 per cent.; Adelaide, 38.

The annexed meteorological register is for Adelaide:—

Month.	Highest Temperature.			Lowest Temperature.			Mean Temperat. at Noon.	Rain.		Winds.		
								Days.	Inches.	Hot.	Warm.	Cool.
November, 1839 . .	73°	82°	75°	58°	60°	53°	68°	14	3.330	0	10	23
December	94	106	95	62	65	52	82	5	.345	1	14	21
January, 1840 . .	92	103	87	65	74	66	87	3	.335	2	5	26
February	80	94	79	70	68	64	82	5	2.010	3	3	20
March	71	100	88	66	17	64	71	7	.445	2	13	27
April	74	91	77	53	62	57	75	10	1.119	0	17	25
May	60	81	63	50	61	55	69	8	1.597	0	25	13
June	54	69	55	48	58	51	60	11	3.247	9	24	11
July	50	96	55	48	58	51	62	8	1.900	0	25	10
August	63	78	67	52	54	48	62	16	3.040	0	24	11
September . . .	70	83	67	49	54	52	65	16	4.540	0	22	11
October	76	84	83	60	56	62	79	6	1.900	1	21	16

The following is an abstract of the rain-gauge kept in Adelaide for the seven years ending December 31, 1846:—

Months.	Average Days.	Maximum.	Minimum.	English Average.
WINTER:—				
May . .	11	3.58	0.25	1.85
June . .	11	3.70	1.72	1.83
July . .	14	3.66	0.86	2.52
August. .	16	4.77	1.66	1.45
September	11	4.64	0.44	2.19
October .	10	2.74	0.94	2.07
SUMMER:—				
November	8	3.31	0.02	2.40
December.	5	3.82	0.35	2.43
January .	4	0.45	0.21	1.48
February .	4	2.01	0.35	0.75
March . .	5	1.00	0.44	1.44
April . .	10	3.58	0.38	1.79

The following abstract of a table, carefully compiled from the meteorological journal in the land-office, for the years 1844, 1845, and 1846, by permission of the government authorities, and extended back to 1839 by private observations, will exhibit the manner in which the warm and cold winds are distributed on this coast during the summer and winter months:—

Months.	Hot.	Warm.	Cool.
SUMMER:—			
November. . . .	—	9	21
December. . . .	1	8	22
January	2	4	26
February	3	3	23
March	1	6	24
April	2	11	14
WINTER:—			
May.	2	20	9
June	—	20	10
July.	—	22	9
August.	—	23	8
September . . .	—	20	10
October	1	13	17

The salubrity of the province is shewn in the returns of births and deaths.

Return of Births which have taken place.

Year.	Registered.	Unregistered.	Total.
1840	416	30	446
1841	544	30	574
1842	641	60	701
1843	650	60	710
1844	671	60	731
1845	708	100	808
1846	937	200	1,137
1847	994	200	1,194
1848	—	—	—
1849	—	—	—
1850	—	—	—

Note.—The unregistered return is below the official estimate.

Return of Births and Deaths to Inhabitants.

Year.	Inhabitants to One Death.	Inhabitants to One Birth.
1840	39.8	32.7
1841	66.5	26.5
1842	76.5	23.0
1843	111.3	24.5
1844	139.8	26.0
1845	100.3	27.6
1846	80.0	24.6
1847	63.9	25.9
1848	—	—
1849	—	—
1850	—	—

Comparison of Births and Deaths to Inhabitants in other Countries.

Countries.	Inhabitants to One Death.	Inhabitants to One Birth.
England . . .	46.4	35.2
Russia	33.0	25.5
France	33.0	27.0
Netherlands . .	27.5	21.0
Italy	24.4	30.6

We have no return of the maladies treated in the Government Hospital at Adelaide, or of their proportionate mortality; the following shews the number of patients treated in the Government Hospital during the years 1844, 1845, 1846, and 1847:—

Year.	Admitted on payment of Fees.	Admitted without Fees.	Discharged.	Died.
1844	4	34	30	8
1845	15	50	53	12
1846	13	64	61	16
1847	30	109	120	15

The subjoined table is an abstract of the register of interments at Adelaide, from 1844 to 1847:—

Month.	1844.			1845.			1846.			1847.		
	Adult.		Children	Adult.		Children	Adult.		Children	Adult		Children
	M.	F.		M.	F.		M.	F.		M.	F.	
January	2	2	8	0	2	16	1	1	13	4	5	36
Feb. .	4	2	6	3	3	21	7	2	40	11	7	45
March .	1	1	7	2	0	26	3	2	28	5	6	27
April .	1	2	9	3	4	12	6	6	19	8	5	21
May .	1	2	11	3	1	9	9	2	26	11	3	23
June .	2	3	6	9	1	7	9	3	14	4	6	15
July .	1	2	3	5	3	6	1	4	10	9	6	9
August.	4	3	6	2	3	8	9	1	7	7	1	22
Sept. .	0	2	3	2	4	4	3	2	13	15	2	29
October	4	3	6	4	4	8	8	3	15	5	7	20
Nov. .	4	1	8	7	1	7	4	4	26	11	2	25
Dec. .	3	2	11	11	6	16	7	4	36	9	9	25
Total .	27	25	84	51	22	140	67	34	247	99	59	327

Note.—The population in these years was—1844, 18,999 1845, 22,390; 1846, 28,000; 1847, 31 000. The two last years are an approximation.

CHAPTER III.

POPULATION, CLASSIFIED AND BY DISTRICTS—RELIGION—EDUCATION—NEWSPAPER PRESS—CRIME—LAWS—GOVERNMENT—NEW CONSTITUTION—LIST OF LIEUTENANT-GOVERNORS.

The colonizing character of the British race was never more strikingly manifest than in the province we are now examining. Fifteen years ago there was not an Englishman in South Australia; now (July, 1850) there are about 50,000 happy, prosperous, and loyal subjects of Queen Victoria in the settled portions of the colony; of whom about 5,000 are Germans, and the remainder immigrants from England, Wales, Scotland, and Ireland, and their descendants.

On the 9th of November, 1836, the first vessel arrived, with emigrants from England, at Glenelg, between five and six miles distant from the site of the present city of Adelaide. The subsequent augmentation of the population of the colony is thus shown:—

Year.	Males.	Females	Total.	Aborigines, estimated.
1837	—	—	200	—
1838	—	—	5,000	1,600
1839	—	—	9,000	1,600
1840	—	—	10,000	1,600
1841	—	—	14,600	1,600
1843	—	—	16,516	1,600
1844	9,526	7,670	17,366	1,600
1845	12,388	9,371	21,759	1,600
1846	14,711	11,182	25,893	1,600
1847	17,531	13,622	31,153	3,680
1848	21,527	17,139	38,666	3,730
1849	—	—	—	—

According to the government census of 1844, the ages and sex of the population in the colony was—

Age.	Males.	Females.	Total.
Under 2 years . . .	890	834	1,724
2 to 7 „ . . .	1,459	1,434	2,893
7 to 14 „ . . .	1,322	124	1,446
14 to 21 „ . . .	922	866	1,788
21 to 45 „ . . .	4,432	2,996	7,428
45 to 60 „ . . .	457	281	738
60 and upwards . .	44	18	62

Of married—males, 3,026; females, 3,032.

The classification by occupations showed—professional persons, landed proprietors, merchants, and bankers, 990; shopkeepers or retailers, 319; mechanics and artificers, 986; shepherds, &c., 763; stockmen in care of cattle, 298; gardeners and farm servants, 1,838; domestic servants, 742; others, not included in the foregoing, 11,260. Classed by religion—Church of England, 9,418; Church of Scotland, 1,691; Wesleyans, 1,666; other Protestant dissenters, 3,309; Roman catholics, 1,055; Jews, 25; Mahomedans and Pagans, 32. The number of houses was—of stone or brick, 1,346; wood, 1,142; other materials, 903 = 3,391.

Population of Adelaide and the neighbourhood in 1844 *and* 1846.

—	Males.	Females.	Total.
Port Adelaide	717	623	1,340
North Adelaide	840	800	1,640
South Adelaide	2,299	2,138	4,437
South-west of Adelaide . .	880	813	1,693
South-east of Adelaide . . .	535	478	1,013
East and North-east of Adelaide	362	314	676
Total in 1844 . . .	5,633	5,166	10,799
„ in 1846 . . .	6,826	6,214	13,040

Abstract of the Census in April, 1846.

Districts.	Area in sq. miles.	Males.	Females.	Total.
Milner Spe. Survey	600*	706	493	1,194
N. of Gawler Town	2,300*	348	110	458
Wakefield and Hutt	8,500*	631	131	762
Moorundie . . .	100*	58	8	66
Wellington . . .	200*	93	12	105
Mount Crawford .	400*	320	210	530
Little Para River .	210	462	369	831
Port Adelaide . .	48	816	713	1,529
North Adelaide .	27	929	914	1,843
South Adelaide .	4	2,902	2,668	5,570
S.W. of Adelaide .	45	965	892	1,857
S.E. of Adelaide .	31	688	584	1,272
E. and N.E. of Adel.	45	526	443	969
Sturt and Onkaparinga Rivers.	68	212	176	388
O'Halloran Hill, &c.	50	392	320	712
S. of Onkaparinga	67	334	248	582
Sources of ditto .	210*	780	672	1,452
Meadows Special Survey . .	162*	301	243	544
Finniss and Angas Special Survey	247*	308	167	475
Encounter Bay, &c.	240	158	107	265
Port Lincoln . .	— *	85	47	132
Kangaroo Island .	1,500*	—	—	70
N. of Rivoli Bay .	2,700*	230	21	251
S. of Rivoli Bay .	8,400*	248	15	263
Yankallilla, &c. .	110	91	47	138
Cape Jervis . .	200	92	40	132
Total .	26,464	12,670	9,650	22,390

Note.—Marked thus (*) are uncertain, boundaries not strictly defined.

NUMBER OF EACH AGE.—*Males.*—Under two years of age, 1,019; two and under seven, 2,143; seven and under fourteen, 1,606; fourteen and under twenty-one, 1,088; twenty-one and under forty-five, 6,111; forty-five and under sixty, 629; sixty and upwards, 74. *Females.*—Under two years of age, 953; two and under seven, 2,101; seven and under fourteen, 1,460; fourteen and under twenty-one, 981; twenty-one and under forty-five, 3,696; forty-five and under sixty, 410; sixty and upwards, 49.

MARRIED OR SINGLE.—*Males.*—Married, 3,847; single, 8,823. *Females.*—Married, 3,811; single, 5,839.

RELIGION.—Church of England, 11,945; church of Scotland, 1,958; Lutheran church, 1,524; Wesleyan methodists, 2,246; other protestant dissenters, 2,888; Roman catholics, 1,649; Jews, 58; Mahomedans or Pagans, 52.

OCCUPATION.—Land proprietors, merchants, bankers, and stockholders, 1,152; clerks and overseers to the above, 162; professional persons, 109; clerks and assistants to the above, 35; manufacturers, brewers, millers, 82; clerks and assistants to the above, 46; shopkeepers and other retail dealers, 338; clerks and assistants to the above, 160; brickmakers, 77; bricklayers, 83; smiths, 152; carpenters and joiners, 362; masons, 92; shoemakers, 225; cabinetmakers, 24; plasterers, 38; harness-makers, 19; tailors, 62; tanners, 19; miners, 269; sawyers and splitters, 240; shepherds and others in charge of sheep, 1,120; stockmen and others in charge of cattle, 215; carriers and their assistants, 134; gardeners, farm-servants, and persons employed in agriculture, 1,492; mariners and fishermen, 85; domestic servants, 818; labourers not included in the above definitions, 726; all other persons not included in the above, 13,993.

HOUSES.—Stone or brick, 1,715; wood, 1,272; other materials or tents, 1,189 = 4,176.

On the 1st of January, 1848, the population of the colony was about 38,666 souls; on the 1st of January, 1849, it was 45,907; it is now estimated at not less than 50,000.

The following is an analysis of the increase since the commencement of 1845:—

Description of Increase.	1845.	1846.	1847.	1848.
Immigrants whose passage was defrayed from the land fund	172	1,469	3,257	6,622
Excess of immigrants arriving at their own cost, over emigrants from the Province	2,118	2,088	1,504	
Excess of births over deaths registered	470	577	499	891
Total	2,760	4,134	5,260	7,513

The following is a comparative return of the number of births, marriages, and deaths:

Births.

Sex.	1844.	1845.	1846.	1847.	1848.
Males	354	380	483	544	—
Females	317	328	454	450	—
Totals	671	708	937	994	1,239

Marriages.

Solemnized.	1844.	1845.	1846.	1847.	1848.
Church of England	57	77	139	218	—
Church of Scotland	21	29	21	20	—
Roman Catholic Chapel	10	10	17	45	—
German Lutheran Church	6	2	17	22	—
Congregational Chapel	11	9	13	23	—
Methodist Chapel	2	11	10	7	—
Primitive Methodist Chapel	—	—	2	2	—
By Dep. Registrar, Adelaide	1	—	—	—	—
„ „ Port Lincoln	—	3	—	—	—
„ Missionaries	—	—	—	9	—
Of the Jewish Religion	—	—	—	1	—
Totals	108	141	219	347	320

Deaths.

Age.	1844.	1845.	1846.	1847.	1848.
7 Years and under	81	147	244	317	—
From 7 to 14 years	4	8	15	20	—
„ 14 to 21 „	4	6	6	16	—
„ 21 to 30 „	17	19	19	39	—
„ 30 to 40 „	20	28	31	53	—
„ 40 to 50 „	6	22	26	32	—
„ 50 to 60 „	5	3	12	12	—
„ 60 to 70 „	2	3	5	4	—
„ 70 to 83 „	1	2	2	2	—
Total	140	238	360	495	510

The proportion of male to female deaths is thus shewn:—

Sex	1844.	1845.	1846.	1847.	1848.
Males	75	143	208	301	—
Females	63	95	152	194	—
Total	138	238	360	495	—

The preceding returns merely show the number of births, marriages, and deaths actually registered in the province; there is, at present, no satisfactory means of estimating the number of those unregistered.

RELIGION.—It is gratifying to observe that from the very foundation of South Australia as a colony, a right appreciation has been evinced of the value of the ordinances of our holy religion; the first emigrants were accompanied by a minister of the gospel, and a church (in frame) for the celebration of religious worship, was forwarded from England. The late Rev. C. B. Howard, colonial chaplain, arrived in the colony, with Governor Hindmarsh, in December, 1836. His ministrations were gladly accepted, his person much respected, and to this worthy disciple of the cross we owe the foundation of the church of Christ in South Australia, which is now the seat of an episcopate of the church of England and of the church of Rome. The church of England bishopric was endowed in 1847 by one of the munificent grants

prompted by the practical piety of Miss Burdett Coutts, a lady whose name cannot be mentioned without adding the passing tribute of respect due to her from every British subject really interested in the abiding welfare of his country.

The relative numbers and position of the different denominations is thus shown:—

Return of the Number and Description of Places of Worship in South Australia, which specifies the locality, amount of accommodation, and average congregation of each.

Denomination.	Adelaide.	Port Adelaide.	Villages near Adelaide.	Willunga District.	Encounter Bay.	Gawler Town.	Kooringa.	Mount Barker.	Totals in 1847.
Church of England:									
Places of worship .	2	1	2	—	—	1	—	3	9
Adapted to contain .	1,050	200	310	—	—	260	—	330	2,150
Average congregation	750	120	160	—	—	80	—	200	1,310
Church of Scotland:									
Places of worship .	2	—	—	—	—	—	—	—	2
Adapted to contain .	750	—	—	—	—	—	—	—	750
Average congregation	200	—	—	—	—	—	—	—	200
Dissenting Chapels:									
Places of worship .	9	1	16	3	1	4	1	4	39
Adapted to contain .	1,950	100	1,640	350	100	1,060	240	440	5,850
Average congregation	1,230	80	660	145	30	790	240	220	3,395
Society of Friends:									
Places of worship .	1	—	—	—	—	—	—	—	1
Adapted to contain .	100	—	—	—	—	—	—	—	100
Average congregation	12	—	—	—	—	—	—	—	12
Roman Catholics:									
Places of worship .	1	—	—	1	—	—	—	—	2
Adapted to contain .	700	—	—	150	—	—	—	—	850
Average congregation	530	—	—	50	—	—	—	—	580

Since the foregoing return was made, several other temples dedicated to the worship of the one true and living God have been erected, and others are in progress; the structures are neat, and the pews, &c. formed of cedar-wood. Due provision has therefore been made by every class of Christians, among whom entire harmony prevails, much to the benefit of practical Christianity, and its essential attributes of charity, peace, and good-will to all. Public worship is celebrated twice on Sunday, the religious festivals of the year are kept as in England, and nearly every church and chapel has a Sunday-school attached.

The state of the religious denominations in 1848, irrespective of the church of England, is thus shewn:—

The *Presbyterians* are divided into the *Scotch Church* and the *Scotch Secession* (voluntary) *Church*.

The *Independents* have five chapels and ministers, and five Sunday schools, consisting of about 600 children.

The *Wesleyan Methodists* have twelve chapels, also schools and branch societies in many places throughout the province. The out-stations are visited from time to time by ordained ministers, who are assisted in their arduous labours by thirty local preachers, and by the employment of this lay agency facilities are afforded for supplying the wants of a scattered community.

The *Primitive Methodists* have five chapels, about 220 scholars in their Sunday schools, and several excellent local preachers, superintended by an exemplary itinerant minister.

The *Baptists* and "*Immersed Believers*," two chapels; the *Christian Brethren*, two chapels; the *Union* denomination, five chapels; the *New Church* or *Swedenborgians*, one chapel; and the Jews a Synagogue.

The *Roman Catholics* have five chapels, and their church is confided to the superintendence of a suffragan bishop under the metropolitan hierarchy of Sydney, New South Wales. Considerable sums have been subscribed towards the erection of a cathedral at Adelaide; and at a public meeting called by their bishop the Roman catholics unanimously resolved to forego any further participation in the support or assistance provided by an act of the colonial legislature, deeming it inexpedient and incompatible with Christian liberty to comply with the stipulations appended to the grant. The indefatigable bishop and ministers of the Roman catholic church are very zealous in their efforts for education, and in the maintenance of their faith.

The German immigrants who abandoned their native land chiefly on account of the

religious persecutions to which they were subjected, and who belong, for the greater part, to the evangelical Lutheran church, have places of worship and pastors for their settlements of Klemzig, Hahndorf, Langmeil, Lobenthal, and Bethany. Each place of worship has a school attached, and the members of the church are required to send their children regularly to the same, from the sixth to the fourteenth year of their age. There are three or four German pastors in the colony; indeed each body of emigrants is accompanied by a minister from their "fatherland."

In June, 1849, the services of the church of England were celebrated in twenty places; of the church of Scotland in four; of the Roman catholic in three; of the society of Friends in one; and by the other denominations of Christians (of whom the Wesleyans are the most numerous), in forty-eight chapels; making, in the whole, seventy-six places of worship in this still infant colony. The government have granted 284 acres of land for the sites of churches, chapels, cemeteries, glebes, and schools, on fourteen applications from the church of England, two from the church of Scotland, two from the Wesleyans, and four from the Roman catholics. Since the foundation of the colony, the local government has contributed £2,157 towards the erection of church of England edifices, and private individuals, £16,689. The amount of the several sums subscribed by other denominations is not known.

An ordinance (No. 10, of 1847), was passed by the local government, to promote the building of churches and chapels for Christian worship, and to provide for the maintenance of ministers of the Christian religion. This ordinance came into operation 1st April, 1848, and was to continue to 1st April, 1850. Up to June, 1849, the church of England had received, under the provisions of this ordinance, in aid of erections, £1,325; in aid of clergy stipends, £464: church of Scotland, £300 and £68: Wesleyan church, £94 and £153: making in all, for ecclesiastical buildings and stipends, £2,406. The aid is issued to the extent of £50, in cases where the population being equal to fifty persons, a sum not less than £50 has been raised by private contributions for a church, chapel, or minister's dwelling; and the issue may be increased to any sum not exceeding £150, provided an equal or greater amount of private contribution shall have been paid up and deposited, or secured to the satisfaction of the governor and executive council. The aid to the stipend of the minister is fixed at rates having reference to the number of sittings (one-fourth part being free of any charge), rented and paid for in any church or chapel; the stipend, however, in no case exceeding £200 per annum. The *South Australian Church Society*, in connexion with the church of England, has an income of about £500 a-year arising from donations and subscriptions; and its objects are the assisting in erecting churches, and maintaining religious worship and Christian education in the metropolis and in the rural districts of the colony. The *Australian Mining Company of London* have built a chapel and school-house at their mines; and, generally speaking, there is a deep feeling of piety manifest among all classes throughout the province.

Education.—Where the responsibilities of the Christian religion are felt by the legislature, the duty of imparting sound instruction will not be neglected; neither is it so in South Australia. An ordinance of the local government (No. 2, of 1847), for the furtherance of education, grants to schoolmasters an allowance, in aid of their emoluments, of £20 per annum for the first twenty scholars, and £1 per annum for every additional scholar, beyond twenty, at school; the total not to exceed £40 to each school in one year. When this ordinance came into operation on the 31st March, 1849, thirty-three schoolmasters, already in the field, became immediate claimants for a sum of about £1,000 per annum. Among other scholastic institutions now in existence, there is now at Adelaide a well-conducted gram mar-school, with 300 pupils, chiefly of the labouring classes, for whom a commodious school-house has been erected by the liberal subscriptions of a few benevolent persons. On 24th May, 1849, the bishop of Adelaide laid the foundation stone of a church of England collegiate school at St. Peter's, Adelaide, for which the local government granted 111 acres of land, and towards which Mr. William Allen, of Buckland-park, Adelaide, a large proprietor in the Burra-Burra Mining Company, gave the munificent donation of £2,700. It is intended that this collegiate school shall eventually merge into a college, and accordingly, excellent statutes and regulations have been laid down for its government. The holy scriptures are

to be taught in the original tongue, and the principles of the Christian religion carefully inculcated. To this most necessary knowledge is to be added instruction in any language, art, branch of science, or literature, which shall, from time to time, be deemed by the visitor and governors of the school important to constitute a sound and liberal education. The property and management of the collegiate school is vested in a council of fifteen governors, of whom not less than three, nor more than five, shall be clergymen of the church of England. Every lay governor, on accepting office, must sign a declaration that he is a member of the church of England, and that he considers the thirty-nine articles of the Book of Common Prayer to be agreeable to the revealed Word of God. The bishop of Adelaide, for the time being, shall be the visitor, and have power, at any time, to enter the school, examine and instruct the scholars, inspect the accounts and general management of the institution, correct abuses, and prevent the adoption of any bye-laws that might contravene the fundamental principles of the school, or frustrate the intentions of the original founders. The decision of the visitor, on any disagreements among the governors, shall be final. The head master must have graduated in arts or civil law in one of the universities of the United Kingdom, and his appointment rests with the governors.

Education is extending very generally throughout the province. In 1849, there were eighty-one day-schools, attended by 2,900 children, and forty-five Sunday-schools, attended by 2,500 children, in South Australia. There is also at Adelaide a school for the instruction of the children of the aborigines, where, in 1849, there were forty male and eighteen female scholars, who cost the local government £10 9*s.* 7½*d.* each, per annum, for education, food, and clothing. The following is a comparative return of Sunday and other schools in the province of South Australia, and of the average number of scholars attending them :—

Schools and Scholars.	1844.	1845.	1846.	1847.	1848.
Scholars, European male .	870	1,397	1,402	1,987	2,933
„ „ females .	856	1,272	1,210	1,910	2,469
„ Native male . .	85	74	76	100	40
„ „ female . .	67	58	62	56	18
Total Scholars . . .	1,878	2,801	2,750	4,053	5,460
Number of Schools . . .	45	81	68	86	127

Mr. Mundy, late the secretary of South Australia, who most ably fulfilled the duties of his office, and carefully collected various statistical returns, says of this document—"The information contained in this return has been obtained from private sources, not from authentic official records, and its accuracy cannot, therefore, be confidently relied upon."

The Press of South Australia dates its origin previous even to the foundation of the colony. On the eve of the departure of the governor and emigrants from England, the first number of the *South Australian Gazette* was printed and published in London, on the 18th June, 1836. The second number of the *South Australian Gazette* was issued at Adelaide on the 3rd of June, 1837. Other newspapers soon started into existence, and there were subsequently issued a *Government Gazette, Southern Australian, Adelaide Observer, Adelaide Times,* a mining journal, &c. A well conducted *South Australian Magazine* was issued monthly, and the two *South Australian Almanacks,* which have been published annually for several years, are a credit to the colony, for the valuable mass of facts which they contain, and the moderate tone in which their able digests are written.

The extension and progressive increase of literature, and of newspapers, is in some degree exemplified by the following return showing the total number of letters and newspapers passing through the General Post Office, distinguishing ship from inland, during the years 1844, 1845, 1846, and 1847 :—

—	1844.	1845.	1846.	1847
Number of Post-offices . .	11	13	17	25
Letters :—				
Ship	26,941	31,277	39,233	48,312
Inland	9,384	11,052	14,136	31,638
Newspapers :—				
Ship	50,389	59,411	73 012	86,233
Inland	10,626	12,981	22,137	37,679
Total Letters	36,325	42,329	53,369	79,950
„ Newspapers	61,015	72,392	95,149	123,912
Income	£752	£946	£1,106	£1,504
Expenditure	£751	£706	£915	£1,269

About one-third of the newspapers under the head of "inland" were received by sea, and are consequently entered twice.

It is stated by Sir H. E. F. Young, the present governor of South Australia, in an interesting despatch to Earl Grey on the state of the province, dated June 8th, 1849, that mails are despatched from the city to Hindmarsh village and to the port six times a-day, the postage being 2*d.*, and the extreme distance eight miles and-a-quarter; the postage to all other places within the colony, thirty-one in number is 4*d.*, and the extreme dis-

tance 233 miles. To the most settled districts the mail is despatched twice a-week; to Guichen Bay, Mount Gambier, Melbourne, and Sydney once a fortnight: and to Port Lincoln, by sea, as opportunities offer. The postage to Melbourne and Sydney is 8*d.*; the overland mail to Sydney is at present but little used by the public. The revenue of the Post-office of South Australia for the year ended 31st March, 1849, was £2,215, which nearly covered the expenditure.

Crime.—It might be supposed from the erection of a gaol at Adelaide, at a cost of about £40,000, that there was a great amount of crime in the province, whereas the very opposite is the fact.

The annexed return extends over several years, and considering the newness of the colony, and its proximity to the large amount of prison population in Tasmania or Van Diemen's island, the number of criminals cannot but be considered small.

Comparative Return of the Number of Offenders convicted in the Province of South Australia since 1840, *the years ending September 30th.—Since* 1847, *returns imperfect.*

In the Supreme Court.	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.	1850.
Felonies:—											
Murder	—	1	—	3	—	2	—	1	—	—	—
Stabbing, cutting or shooting with intent to kill	—	—	—	—	1	—	—	1	—	—	—
„ „ or do some bodily harm	—	—	2	1	1	—	—	—	—	—	—
Manslaughter	—	—	1	—	—	—	—	—	—	—	—
Highway robbery	4	1	—	—	1	—	5	—	—	—	—
Assault, with intent to rob	2	2	—	1	—	—	—	—	—	—	—
Burglary	2	1	—	1	—	—	2	3	—	—	—
Stealing in a dwelling-house	7	3	4	1	—	1	—	—	—	—	—
Burglariously breaking and entering dwelling-house, and stealing therefrom	—	—	—	2	—	—	1	—	—	—	—
Breaking and entering dwelling-house, and stealing therefrom	4	—	1	2	—	—	2	—	—	—	—
Stealing in dwelling-house, and putting the persons therein in bodily fear	4	—	—	—	—	—	—	—	—	—	—
Sheep-stealing	1	—	3	2	1	—	—	2	—	—	—
Horse-stealing	—	1	—	1	—	1	—	1	—	—	—
Cattle-stealing	—	—	4	3	1	—	—	—	—	—	—
Receiving stolen goods	1	1	1	—	2	—	—	—	—	—	—
Larceny	16	20	11	6	15	8	17	16	—	—	—
Larceny and former conviction	—	—	—	3	—	1	—	—	—	—	—
Stealing from the person	—	3	6	1	—	—	1	—	—	—	—
Stealing in a warehouse	1	1	1	—	—	—	—	—	—	—	—
Forgery	1	—	1	—	—	—	1	—	—	—	—
Uttering forged notes, orders, &c., with intent to defraud	—	—	—	1	—	1	2	—	—	—	—
Counterfeiting coin	—	—	—	—	7	—	—	—	—	—	—
Total felonies	43	34	35	28	29	14	31	24	—	—	—
Misdemeanours:—											
Assault, intent to commit rape	—	1	—	—	—	1	1	—	—	—	—
Fraud	1	—	2	—	1	—	—	—	—	—	—
Assault	3	2	—	1	3	—	1	—	—	—	—
Concealing birth of child	—	—	—	—	—	1	—	—	—	—	—
Total misdemeanours	4	3	2	1	4	2	2	—	—	—	—
Total convictions	47	37	37	29	33	16	33	24	—	—	—

The Laws are, as in the other Australian colonies, entirely English, and administered by a supreme court, which sits for civil and criminal business four times a year. There is a judge, an advocate-general, and crown solicitor, a commissioner of insolvency, a sheriff, and an official assignee. The members of the legal profession, who in 1849 had taken out certificates as barristers and solicitors, were in number twenty-four. A resident magistrates' court sits daily at Adelaide, and there are seventy of her Majesty's justices of the peace in different parts of the province.

The establishment of district or county courts, for the economical and summary recovery of debts under £50, according to the constitution of the "county courts," which are now working so satisfactorily in England, would be a great advantage, if extended to our colonies, and would supersede the necessity of "courts of request."

Government.—The affairs of the province are administered by a lieutenant-governor, usually styled a governor, who is joined in an executive council by the colonial secretary, the advocate-general, and the surveyor-general. The Legislative Council consists of the lieutenant-governor, colonial secretary, attorney-general, register-general, and four private gentlemen of the colony, holding no office under the government, but nominated by the crown under the recommendation of the secretary of state for the colonies. It is proposed to change this form of legislative authority to that of a Legislative Assembly, with one-third the number of members to be nominated by the crown. Of the proposed alteration I have given full details at pages 553 to 558.

The bill for the better administration of the affairs of the Australian colonies has now (19th of June, 1850) passed its second reading in the House of Lords without any material alteration in the provisions of the bill, excepting the withdrawal of the power from the crown of disposing of the waste lands in the colonies (see page 554), and the extension of the franchise by Earl Grey, conformable to the suggestions of leading practical men in both houses of the legislature. The bill may now, therefore, be considered as finally settled, and I deem myself at liberty to offer a remark which I did not feel justified in making in a work of this nature while the subject was pending; considering it my duty to avoid becoming a partizan on so important a question, or endeavouring to influence public opinion on what has not assumed in legislation or in action the character of a fact. With reference, then, to the measure for preserving, at least for the present, the existing form of Legislative Assembly of New South Wales (see p. 556), and for granting to the other Australian colonies a similar legislative body, I think that such procedure, namely, one House of Assembly, partly elected by the people, and partly nominated by the crown, the proportion nominated being one-third of the elected, decidedly preferable to having *two chambers* elected by popular suffrage.

In the committee of the House of Lords on the Australian Colonies' Government Bill (11th of June, 1850), Lord Monteagle moved that there shall be within each of the said colonies of New South Wales and Victoria a Legislative Council and a Representative Assembly; his lordship supported his motion by references to the mischievous and dangerous effects resulting from a single chamber, and urged that "the only way to avert the evil (of a single and democratic chamber) was by a double chamber, to the upper of which, by the election of persons of greater age, for a longer time, and with a higher qualification, they would impart a stable and conservative character."

Lord Lyttleton, in supporting the proposition of Lord Monteagle, contended that "it was the bounden duty of the mother country to lay down the form of constitution best suited to her colonies;" according, however, to the report in the *Times* of the 12th of June, 1850, his lordship suggested that "the bill might be sent out to the colonies with words providing a double chamber, but leaving it to the colonies to fill up the scheme."

The bishop of Oxford suggested that there should be two chambers—one called the *Upper*, and the other the *Initiative*, but *both elected;* the upper to consist of a *small number* of persons, to be elected by a high franchise, and to be older men than the members of the Initiative: further, that they should sit for nine, instead of three years; and that only one-third of the members of the upper chamber should retire at a time. His lordship thought that a chamber thus constituted would be in "favour of things as they were," and thus act as a check on the Initiative chamber, who would "seek to improve by continual innovations;" and that the conflict and collision which was inevitable in every self-governing country, especially in those inhabited by our own blood and race, would be mitigated in its evil consequences.*

These propositions are at variance with the principles of monarchical government: they are perfectly in unison with the republican constitution of the United States, and might be supposed to emanate from the senate at Washington, rather than from the house of Lords in London. The congress of the United States of North America is a practical proof that *two elected* chambers are no security against the acknowledged evils of democracy, however different may be the qualifications of the electors or of the elected; and the sagacity of General Washington enabled him clearly to foresee, that a plutocracy, or domination of wealth, would in time become an all-pervading influence in the republic which he was unavoidably

* Debate in the House of Lords, 10th June, 1850. —*Times.*

compelled to adopt. A plutocracy is the great bane of colonial society; there being no object of attainment for human ambition, energy, or patriotism, the mere accumulation of riches becomes the sole spring for action, and men lose those ennobling influences which help to form the character, and guide the conduct of those who live under the eye of a sovereign, and desire the honorary or hereditary distinctions which the crown alone can bestow.

It is with deference, and, I may add, with diffidence, that I venture to offer an opinion adverse to the propositions put forth by several distinguished members of both houses for two elective chambers in the Australian colonies; but my colonial experience teaches, that to leave the representative of the crown in the distant parts of this empire without any gradation of rank between himself and the representatives elected by the people—without any breakwater between the surge of popular opinion and the undoubted prerogatives of sovereign power—must inevitably lead, and that at no distant date, to the formation of a republic, and a separation from monarchical England.

If, therefore, her Majesty's ministers did not deem that there were the materials in Australia for creating two chambers, in accordance with the principles of the British constitution, they had no alternative but the maintenance of the legislative system introduced by Lord Stanley, in 1842; and Earl Grey truly urged that the Legislative Council of New South Wales had "acted with more judgment, discretion, and regard to the public interests, than was usual with colonial governments;" that it stood "very high among colonial administrations, and was, on the whole, well adapted to the condition of the people." (June 10, 1850).

Time and circumstances will eventually necessitate the formation of legislatures in our southern colonies similar to those which have existed for so many years in British America and in the West India islands; for this change the bill now sanctioned by the house of Commons and the house of Lords provides; and when that necessity arises, her Majesty's ministers and the Imperial Parliament can more effectually deal with the question than probably could be satisfactorily done at the present moment.*

Lieutenant-Governors of South Australia according to the dates of their being proclaimed in the colony.

Captain Hindmarsh, R.N. . . .	Dec. 28th, 1836.
Lieutenant-Colonel Gawler . . .	Oct. 12th, 1838.
Captain Grey	May 10th, 1841.
Major Robe	Oct. 25th, 1845.
Sir H. E. F. Young	Aug. 2nd, 1848.

* Since the foregoing was written, Sydney papers have been received from New South Wales, to the date of 21st February, 1850, containing a memorial which is said to embody the wishes of the greater part of the colonists, who pray that all classes of the community may be fairly represented in the proposed new constitution, which, they hope, will resemble the British constitution as closely as the circumstances of the colony will allow; they pray to be "protected against rash and hasty legislation by the interposition of a second chamber, and that this step in the progress of constitutional government be no longer deferred." The constitution which the colonists seek is, the vesting of their government in three estates—(1.) a governor appointed by the crown; (2.) a Legislative Council, consisting of members nominated by the crown, together with *ex-officio* members of the executive, in the proportion of one *ex-officio* to four non-official members; (3.) a House of Assembly elected by the colonists. This is substantially the plan recommended in my *Colonial Policy*, published in 1837, for colonies when ripe for constitutional government; it is one for which New South Wales is now prepared, and which the colonists seek to obtain.

In the Legislative Council of South Australia, the Honourable John Morphett, an intelligent, respectable, and influential member of the local legislature (see Despatch from Sir H. E. F. Young to Earl Grey, dated Adelaide, 16th November, 1848), proposed—"That, in the opinion of this council, the form of the legislature should, as nearly as possible, resemble that of the mother-country, consisting of a governor and two chambers, one in the nature of an upper chamber, *to consist of hereditary members, nominated by her Majesty the Queen*, and which members of the upper chamber, in order to secure identity of interest with the colony, should possess a certain landed qualification, free and unincumbered. And, further, in order to secure a permanence of that identity of interest, it is desirable that each inheriting member should possess, and prove the possession of, an equal landed qualification to his predecessor.—That, in the opinion of this council, the second chamber should consist of members elected by the people.—That all bills passing the two chambers, and receiving the assent of the governor, should at once become law.—That in the opinion of this council, an executive council should be given to the governor, consisting of two officials, having seats in one or other of the chambers, and two members of each of the chambers, all to be nominated by the governor. That such members of the executive should continue in office so long as the government could command majorities in both chambers upon questions introduced to the chambers by the governor, and so long as they retained seats in the respective chambers of which they were members. That such members of the executive should receive certain fixed emoluments. That in order to secure the irresponsibility of the governor, who would be a third branch of the legislature and the representative of sovereignty, the members of the executive council should be responsible, and should go out of office as before provided, and upon a vote of want of confidence, passed after due notice being given of its introduction, by the chamber of representatives."

CHAPTER IV.

FINANCIAL STATE, REVENUE, LAND SALES, CUSTOMS' DUTIES, AND EXPENDITURE—BANKING INSTITUTIONS—COMMERCE, IMPORTS, EXPORTS, AND SHIPPING—STAPLE PRODUCTS—MINES AND MINERALS—AGRICULTURE—LIVE STOCK—PUBLIC COMPANIES AND SOCIETIES—RATES OF WAGES—PRICES OF PROVISIONS—FIELD FOR EMIGRATION.

The first chapter of this book on the history of South Australia, shews the improvident expenditure and consequent financial embarrassment, caused by the proceedings of Governor Gawler.

To save the province from ruin, the aid of the Imperial Parliament, as before stated (see page 645), became absolutely necessary, and in the year 1841, £102,649 were advanced to meet Governor Gawler's drafts on the colonization commissioners, and £52,350 to defray other expenses; in 1842, £27,290 was voted to meet Governor Gawler's drafts, and £32,646 to meet Governor Grey's; in the course of the three following years, £10,446 were advanced to meet Governor Grey's, making a total of £225,382, which, though at first voted as a loan, was subsequently confirmed as a grant. There has been, I believe, much discussion as to the amount of aid afforded by Parliament, but the above statement is given on the authority of a document recently sent home by the governor of South Australia. Notwithstanding, however, the large sums thus granted, the provincial government remains burdened with a bond debt of £85,000, of which the interest is being paid by the colonists from the land revenue.

The colonists claim from the Imperial Treasury a sum of about £82,000 on the grounds of money to that amount having been abstracted from the land fund, and applied by the colonization commissioners during the difficulties of the colony to governmental purposes, notwithstanding the pledge given to all purchasers of land previous to the year 1841, that the produce of the land sales should be devoted solely to the furtherance of emigration. This demand the British government consider unreasonable; the common sense of the matter appears to me, that the sum in question having been borrowed from the emigration fund in aid of the local revenues, should be repaid from the same source for which it was borrowed—that is, whenever the fixed and incidental revenue exceeds the wants of the local government, a portion should be set aside for the repayment of the money borrowed. Annexed is a comparative return of the net ordinary revenue during the last six years:—

Details of Fixed Revenue.	1844.	1845.	1846.	1847.	1848.	1849.
Customs (including pilotage and tonnage dues)	£20,124	£25,590	£37,643	£48,742	£55,439	£73,900
Postage	752	946	1,108	1,504	1,954	2,000
Fees—Public Offices	1,689	2,207	2,561	3,533	5,366	4,500
Fines—Law Courts	274	347	175	237		
Licences	2,156	2,409	2,941	3,733	4,593	5,420
Auction duty	563	570	546	1,458	1,521	2,000
Assessment on live stock	1,486	2,191	1,341	4,860	3,175	4,000
Permits	44	52	47	—	—	—
Storage of gunpowder	24	65	155	174	129	200
Tolls	—	—	280	254	—	—
City rates	—	—	70	1,181	1,318	700
Total fixed revenue	27,116	34,381	46,871	65,679	73,495	92,700
Incidental	761	1,800	1,146	1,348	9,352	1,480
Total revenue	27,877	36,182	48,017	67,027	82,847	94,200
Deduct the revenue from each preceding year	—	27,877	36,182	48,017	67,027	82,847
Increase on each year	—	8,305	11,835	19,010	15,820	11,353

Note.—The circumstance of a large proportion of the assessments on live stock *due* for 1846 not having been collected until 1847, accounts for the apparent decrease in this branch of the revenue in the former year, and its increase in the latter. The revenue for 1849 is an estimate for the year ending 31st March, 1850, as laid before the Legislative Council at Adelaide, in the session of 1849-50.

It will be observed that since 1844, there has been a steady annual augmentation of the revenue. The increase during the year 1847 over that of 1846 is thus noted by Lieutenant-governor Robe:—

Duties of Customs on Imports.—On spirits, an increase of 23 per cent.; on tobacco, 24; on wines, 98; on other goods, 35; on other customs' receipts, 67; on the general receipts of customs, 29.

The other sources of revenue show a corresponding increase in 1847:—Postages, 36 per cent.; fees of offices, 38; of which the registry fees, 44; fines, 36; licences, 27; auction duty, 166; and on the gross revenue, 39.

The auction duty increased very largely, which is attributed by the lieutenant-governor to the admission of goods to free warehousing, under the Ordinance No. 16, of 1846.

The annexed statement gives in detail the income of 1847 and 1848:—

Details of Income.	1847.	1848.
CUSTOMS:—		
Spirits imported	£18,378	£22,714
Wines	2,806	3,119
Tobacco	7,448	8,890
Other goods	19,118	20,094
Warehouse rents	990	222
Incidental receipts	—	57
	50,634	55,098
Less drawback repayments	1,892	596
Total	48,742	54,501
MISCELLANEOUS:—		
Postage of letters	1,504	1,954
Fines and fees	3,771	5,366
Licences (Publicans)	3,527	4,350
„ (other)	206	243
Assessment on stock	4,860	3,175
Auction duty	1,458	1,521
Storage of gunpowder	174	129
Tolls	254	—
City rates	1,181	1,318
Pilotage and harbour dues	—	938
Total	16,735	17,994
INCIDENTAL:—		
Rents of government property	691	976
Sales of „ „	123	307
Surcharges recovered	26	1
Repayments	299	1,160
Miscellaneous	207	6,969
Total	1,346	9,413
LAND FUND:—		
Proceeds of sales of waste lands	—	33,748
Licences, occupation	—	1,570
„ timber	—	660
Rents of aboriginal reserves	—	28
Immigration department	—	76
Repayments	—	30
Total	—	36,112
General total of receipts	—	119,023

Note.—No returns in Blue Book of land fund for 1847.

The customs duties form the largest item of revenue. Until the 6th of July, 1849, there was a differential tariff in South Australia, but under the authority of the Imperial Legislature the colonial Legislative Council from the above date adopted an uniform tariff on the importation of the goods and produce of all countries alike. The duties levied on the principal articles are—manufactures of cotton, silk, wool, and linen, *five per cent. ad valorem;* also on arms, apparel, baskets, boats, brass manufactures, brooms and brushes, clocks and watches, copper manufactures, cutlery, earthenware, furniture, gloves, grindery, hair manufactures, iron manufactures unenumerated, implements and tools, lead manufactures, machinery, matting, musical instruments, netting, paper stained and hangings, perfumery, pewter ware, pictures, pipes not of common clay, plate and plated goods, saddlery and harness, stationery, tin ware, *five per cent. ad valorem.* On all other articles the duties are as follows:—

Alkali, 6d. per cwt.; annatto, 3s.; arrowroot, 3s.; bacon and hams, 2s. 6d.; bags and sacks—corn, 5s. per 100; ore, gunny and returned, 6s. 6d.; bales for wool, 2d. each; beef and pork, 1s. 6d. per cwt.; beer, porter, ale, cider, and perry, 3d. per gallon; liquid blacking, 4d. per gallon; paste blacking, 1d. per lb.; printed books, 6s. per cwt.; barrows and trucks, 1s. each; boots, 6s. per dozen pairs; half boots, 3s.; shoes, 2s.; children's, 1s.; bread and biscuit, 7d. per cwt.; glass and stone bottles, 1d. per dozen; fire and bath bricks, 5s. per 1,000; other bricks, 2s.; brimstone, 6d. per cwt.; butter, 3s.; chain cables, 1s. 6d.; tallow candles, 3s.; wax, composition, sperm, &c., 6s.; canvass, 2s. per bolt; carts and drays, 10s. each; wheeled waggons and timber carriages, 20s.; carriages, 5 per cent. ad valorem; empty casks, 2s. per tun; cement, 4d. per cwt.; chalk, 1s. 6d. per ton; cheese, 3s. per cwt.; chocolate and cocoa, 1d. per lb.; coals, 9d. per ton; coke, 2s.; coffee, 4s. per cwt.; confectionary, 2d. per lb.; copper, sheathing and nails, 5s. per cwt.; cordage and rope, viz., Europe, 2s. per cwt.; Manilla, 1s. 6d.; Coir and Jute, 9d.; unenumerated, 1s. 6d.; small cord and twine, 5s. per cwt.; cork, 2s.; corks, 1d. per gross; corn, meal, and flour, viz., wheat, 1s. 6d. per quarter; barley, 1s. 3d.; oats, 1s. 3d.; maize and millet, 1s.; peas, beans, and pulse, 1s. 6d.; malt, 3s.; flour and meal, 1s. per 100 lbs.; bran and pollard, 3d. do; cutlery, 5 per cent. ad valorem; drapery, ditto; drugs—corrosive sublimate, 2d. per lb.; spirits of tar, 1d. per gallon; vitriol, 1d.; unenumerated drugs, 5 per cent. ad valorem; other unenumerated and manufactures, ditto; bed feathers, 1d. per lb.; dry and pickled fish, 1s. per cwt.; flax, 1s.; dried fruits of all sorts, 2s.; in bottles, 6d. per dozen quarts; preserved in sugar, succades, and jams of all sorts, 1d. per lb.; fresh, 6d. per bushel; plate glass, in squares exceeding 600 inches, 4d. per lb.; not exceeding 600 inches, 3d.; crown and sheet, in squares exceeding 200 inches, 2s. per 100 feet; not exceeding 200 inches, 1s. 6d.; flint glass, cut, cast, mirrors, and manufactures, 5 per cent. ad valorem; glue, 1s. 6d. per cwt.; grease 1s.; sport-

ing gunpowder, in canisters, 5s. per cwt.; blasting, 2s. 3d.; groceries, 5 per cent. ad valorem; haberdashery and millinery, ditto; hosiery, ditto; curled hair for upholsterers' use, 1d. per lb.; hats and caps, 5 per cent. ad valorem; hay, 2s. per ton; dressed hemp, 1s. 6d. per cwt.; undressed tow and oakum, 1s.; dressed hides, 3s.; raw, salt, and dried, 1s.; honey, 4s.; hops, 2d. per lb.; writing ink, 3d. per gallon; printing ink, 1d. per lb.; iron, viz., bar and rod, 10s. per ton; sheet and hoop, 14s.; pig, 5s.; sledges, anchors, anvils, plates, cart-arm moulds, and articles of wrought iron, heavy and in the rough, 1s. per cwt.; cart-arms and boxes, finished—chain, articles of wrought iron, finished, 1s. 6d.; camp ovens, pots, boilers, and castings, 10d.; refined isinglass, 6d. per lb.; common for manufacture, 2d.; implements and tools, 5 per cent. ad valorem; jewellery, ditto; old junk, 1s. per cwt.; lard, 2s. 6d.; lead, viz., pig, sheet, and shot, 1s. per cwt.; leather, sole, 3s. per cwt.; kip and harness, 6s.; calf, 1d. per lb.; patent bazils, 5s. per dozen; kangaroo, 1s.; hogskin, 1s. each; basils, 6d. per dozen; enamel, 3s. 6d. per hide; lime and lemon juice, and syrup of all sorts, 3d. per gallon; lucifers, 4d. per gross of boxes; maccaroni and vermicelli, 1d. per lb.; mats and matting, 5 per cent. ad valorem; musical instruments, ditto; mustard, 1d. per lb.; needles, 3d. per 1,000; nuts, viz., almonds, walnuts, chesnuts, filberts, and small nuts, 2s. per cwt.; shelled almonds, 4s.; cocoa, 6d. per 100; oil, black, 1d. per gallon; sperm, head-matter, and other fish or animal oil, 3d.; linseed, rape, hemp, and cocoa-nut, 2d.; olive, castor, and other vegetable oils, 6d.; oilman's stores, 5 per cent. ad valorem; onions, 1s. per cwt.; paints, 1s.; painters' colours, and whiting, 6d.; brown paper, wrapping, and blotting, 3s. per cwt.; printing and cartridge, 5s.; writing, 1d. per lb.; other unenumerated manufactures, 5 per cent. ad valorem; parchment, 3s. per roll; percussion caps, 2d. per 1,000; pickles and fruit preserved in salt, 4d. per gallon; tobacco pipes, of common clay, 1d. per gross; pitch, 1s. per barrel; potatoes, 3s. per ton; provisions and preserved meats, 3s. per cwt.; pins, 1d. per lb.; rice, 9d. per cwt.; rosin, 6d. per barrel; sago, 1s. per cwt.; salt, 3s. per ton; saltpetre, 1s. 6d. per. cwt.; skins for tanning, 4d. per doz.; soap, 1s. per cwt.; spices, viz., cassia, 3s. per cwt.; cinnamon, 2d. per lb.; cloves, 1d.; mace, 2d.; nutmegs, 2d.; ginger, 2s. per cwt.; pepper, 1s. 6d. other spices, 5 per cent. ad valorem; spirits or strong waters of all sorts, viz., for every gallon of such spirits or strong waters of any strength not exceeding the strength of proof by Syke's hydrometer, and so in proportion for any greater or less strength than the strength of proof, and for any greater or less quantity than a gallon; also, perfumed spirits not being sweetened or mixed with any article so that the degree of strength thereof cannot be exactly ascertained by such hydrometer, 10s. per gallon; spirits, cordials, or strong waters, sweetened or mixed with any article so that the degree of strength thereof cannot be exactly ascertained by Syke's hydrometer, 10s.; starch, 2s. per cwt.; steel, 2s.; stones—millstones, 2s. per foot diameter; grindstones, 1d.; roofing slates, 3s. 6d. per 1,000; slabs and flagstones, 1s. per 100 feet superficial; tomb and wrought stones, 1d. per foot ditto; marble, wrought, 6d. ditto; bluestone, 5s. per cwt.; refined and candy sugar, 4s. per cwt.; muscovado, 2s.; molasses, 2s.; tapioca, 2s.; tallow, 2s.; tar, 1s. per barrel; tea, 2d. per lb.; tin plates, 2s. per box; tobacco, manufactured, 2s. per lb.; unmanufactured, 1s.; cigars and cheroots, 5s.; snuff, 2s.; boiled down in bond for sheepwash, 1d.; toys, 5 per cent. ad valorem; turnery and woodenware, ditto; spirit of turpentine, 2d. per gallon; vinegar, 1d.; whalebone, 14s. per cwt.; wine, 1s. per gallon; wood, viz., posts and rails, hand spikes, and poles, 1s. 6d. per 100; paling, 6d.; shingles and laths, 6d. per 1,000; trenails and spokes, 2d. per 100; oars, 2s. per 100 feet; square timber, and balks, spars, deals, battens, quartering, planks, boards, and sawn, hewn, or split timber of all kinds, not otherwise particularly enumerated or described, 2s. 6d. per 40 cubic feet; manufactures of wood, 5 per cent. ad valorem; zinc, and manufactures of ditto, ditto.

Unenumerated articles, raw and manufactured, 5 per cent. ad valorem.

Animals, living; baggage of passengers; bottles imported full; bullion and coin; plants and trees; seeds and roots, garden; specimens illustrative of natural history, and wool unmanufactured are imported free.

Customs' Storage.—Ample accommodation is provided by the government at this port for the storage of goods in bond, for which the following are the weekly rates of storage:—For every pipe or puncheon, 1s.; hogshead or half-pipe, 6d.; barrel or quarter-cask, 3d.; tierce, 4d.; six-dozen bottle cases, 6d.; three-dozen ditto, 3d. Any less or greater quantity to be charged in proportion to the above scale.

The powder magazine is situated on La Fevre's Peninsula, opposite Port Adelaide, where powder is stored at the following rates:—For each barrel containing 50 lbs., for not more than six weeks, 1s.; above six weeks, per week, 2d.; containing less than 50 lbs., for not more than six weeks, 6d.; above six weeks, per week, 1½d.

Rates of Pilotage.—For every vessel taking a pilot, £2; and in addition for every foot of draft of water above nine feet, 10*s.*; vessels employing the steam tug have one-fourth of their pilotage remitted. *Harbour Services*—Mooring, unmooring, and removing vessels above 70 and under 100 tons, 10*s.*; if 100 tons register, 15*s.*; and for every 20 tons above 100 tons, 1*s.* In addition to the above, 1*s.* per hour for each man in the harbour department employed in the above service. The charges for the use of the steam tug for towing in or out of harbour any vessel of 200 tons register or less, £5; and for every ton over 200 tons, 6*s.*

Dues on entry and clearance, wharfage and pilotage, were abolished in 1815. The storage charges at Port Adelaide are for every pipe or puncheon, weekly, 1*s.*; hogshead or half-pipe, 6*d.*; barrel or quarter cask, 3*d.*; tierce, 4*d.*; six dozen bottle case, 6*d.*; three dozen ditto, 6*d.*

All her Majesty's vessels of war, hired transports, merchant ships freighted wholly or in part by government, vessels of the royal yacht squadron, and ships of war belonging to friendly nations, are exempt from all pilotage, dues, &c.

"City rates," or assessments on houses, were raised in 1847 from six to twelve-pence

in the pound; the whole of such rates are expended upon the streets of Adelaide. Licences to publicans yield no inconsiderable revenue, as will be seen by the subjoined:—

Number of Publicans' Licences granted in South Australia from 1844 *to* 1847, *inclusive.*

Year.	Publicans' General Licences.		Wine and Beer Licences.		Storekeepers' Licences.		Total.
	No.	Amount.	No.	Amount.	No.	Amount.	
1844	63	£1,575	7	£84	5	£25	£1,684
1845	73	1,825	12	144	5	25	1,994
1846	106	2,650	13	156	6	30	2,836
1847	135	3,375	6	72	9	45	3,492

Comparative Number of Public Houses in the Province of S. Australia from 1844 *to* 1847 *inclusive.*

Locality.	1844.	1845.	1846.	1847.
Adelaide	34	41	54	61
Port Adelaide and Albert Town	3	4	4	5
Country, including P. Lincoln	33	40	60	66
Total	70	85	118	132

The annexed table shews the quantity of land sold, the price per acre, and the income:

Year.	Quantity of land sold, in acres.	Average price per acre.	Total amount of Purchase-money.		Proportion received in each year.
			Paid in England.	Paid in S. Australia.	
1835	58,995	£0 12 0	£35,397	—	£35,397
1836	1,680	0 12 0	1,248	—	1,248
	240	1 0 0			
1837	591	6 1 0	3,120	3,594	6,714
	3,120	1 0 0			
1838	48,040	1 0 0	37,960	10,080	48,040
1839	170,841	1 0 0	48,336	122,505	170,841
1840	15,565¾	1 0 0	7,040	8,525	15,565
1841	1	0 12 0	320	7,331	7,651
	7,650¼	1 0 0			
1842	17,081½	1 0 0	80	17,001	17,081
1843	598	1 0 0	—	613	613
1844	1,496*	2 6 4	100	5,566	5,666
	1,932†	1 2 8			
1845	5,675*	1 11 3	—	52,902	52,902
	43,983†	1 0 0			
1846	11,193*	4 9 8	21,720	76,874	98,594
	48,209†	1 0 0			
1847	16,911*	1 2 7	908	35,428	36,336
	18,092†	1 0 0			
1848	29,200	1 1 9	—	—	36,112
1849	—	—	—	—	—
1850	—	—	—	—	—

Note.—325,464¾ acres were sold at fixed prices, and 2,367 acres disposed of by public auction up to the year 1844; 3,463 acres have been reserved for the aborigines. The acres marked thus (*) were sold by public auction, and those marked thus (†) at fixed prices.

It will be observed, that in 1843 the sales of land had diminished to 598 acres; and even that small quantity would not have been sold at 20*s.* an acre, but that some of it contained minerals, which in that year were discovered in South Australia. The subsequent sales have been chiefly owing to this fortunate addition to the natural resources of the colony. It is understood that the colonists of South Australia are generally favourable to the maintenance of the system of public sales at a minimum price of 20*s.* per acre. This, considering the mineral value of the lands, and that most of the purchases have been made on this principle, is not unreasonable. But it seems to be forgotten that the minimum price at public auction of a commodity in demand is of comparatively little consequence, for, in this case it may be said with Hudibras,

"The value of a thing
Is just as much as it will bring."

If limited quantities of surveyed lands were annually offered to public competition, at a price, say, of 5*s.* per acre, due notice being given of such sales in England and in Australia, and accurate surveys on an extended scale deposited in a crown-land colonial office in London, as well as in the colony; whatever the land was actually or prospectively worth would be bid for it, irrespective of a minimum upset price.

During the debate on the Australian colonies bill in the House of Lords, Lord Lyttleton proposed that the power of repealing all or any part of the 5 & 6 and 9 & 10 of Vic., regulating the sale of waste lands in the Australian colonies, should be given to the governors in council of New South Wales, Victoria, Van Diemen's Land, and South Australia; and that they might make further or other provisions for the management of the said waste lands, and the appropriation of the sums derived from such sales. His lordship ably and rightly contended that it was altogether inexpedient longer to maintain the existing price of £1 per acre in these colonies, especially in New South Wales and Victoria; and he referred to the report from the Legislative Council of New South Wales on the subject (see p. 428). That the local legislatures would reduce the price of land he had no doubt; but he did not imagine they would be disposed to alter any of the other principles of the existing land sales; they would maintain the division of the land fund in two parts, applying the one to local improvements, the other to emigration. If the local governments did not thus act, the Imperial Legislature might refuse their assent to any deviation from that principle. As to those who had purchased land on the understanding that the *minimum* price of £1 per acre was not to be reduced, he had no doubt but the local legislatures would act rightly in regard to them; but

these vested individual interests were, in New South Wales and Victoria, exceedingly few in number, as the land sales at this price were very limited.*

Earl Grey, however, in the same debate, (12th June, 1850), truly observed, that the "crown lands in the colonies were domains held by the sovereign as trustee, for the benefit of all the subjects of the realm," and that "the interests of the people of England were to be considered on this question." The subject is one of great importance to all classes; and other occasions will occur for its further examination.

At the beginning of the year 1849, the land alienated by the crown in South Australia amounted to 499,283 acres; there were then surveyed and unsold county lands, 82,287 acres, and 16,902 acres surveyed and unsold mineral lands open for purchase, at the upset price of 20*s.* per acre, without competition, as they had been previously offered for sale, and remained unsold. The lands surveyed, but not yet sold, comprise 320,168 acres, and, under the existing regulations, cannot be sold for less than twenty shillings per acre. The unsurveyed land is computed at two million acres. How much of it is available for tillage or for pasturage it is impossible to say; but even at five shillings per acre, there is a considerable revenue still to be obtained by the crown from this source. The average cost of the surveys in South Australia, during the year 1848, was about fourteenpence-halfpenny per acre, including everything but office-rent.

Expenditure.—In 1840, when the colony was just formed, the expenditure was £169,966; but this ruinous extravagance was checked, as we have seen, by dishonouring the drafts of the governor, and by the recal of Colonel Gawler. As soon as practicable, his successor, Captain Grey, reduced the expenditure to reasonable limits; and, in 1844, it was within £30,000: the subsequent annual disbursements have, in each year, been less than the revenue. The progressive increase is thus shown:—

Expenditure.	1844.	1845.	1846.	1847.	1848.	1849.
Civil establishment	£17,293	£17,507	£18,303	£22,262	£25.449	£39,997
Contingent expenditure . . .	2,017	3,133	4,001	6,722	10,407	2,640
Judicial establishment	3,636	3,421	3,637	4,126	4,331	5,707
Contingent expenditure . . .	258	245	468	1,087	1,322	250
Ecclesiastical establishment. . .	214	350	350	350	350	350
Contingent expenditure . . .	—	—	777	1,892	—	—
Public buildings and works . .	509	2,728	3,896	15,646	28,888	20,034
Miscellaneous	5,523	4,711	5,772	6,891	9,382	11,333
Total	29,450	32,099	37,207	58,976	80,129	80,344
Deduct expenditure of previous years	—	29,450	32,099	37,207	58,976	—
Increase on each year.	—	2,649	5,108	21,769	21,153	—

Note.—The great increase of expenditure during the year 1847 was occasioned by the number of public works—bridges, buildings, &c., completed, or which were in course of completion, during that year. In addition to the above annual expenditure, the following repayments have been made from the Colonial Revenue on account of debts incurred by the local government prior to the year 1844, viz., to her Majesty's Treasury, the sum of £1,274 15*s.* 4*d.*, paid in 1844 in liquidation of claims incurred in the year 1841; to the Land Fund, £984 11*s.* 2*d.* in the year 1844; £1,800 in the year 1845; £9,000 in the year 1846; and £7,820 2*s.* 9*d.* in the year 1847. 1849 is an estimate only.

An abstract of the expenditure estimate for the year ending 31st March, 1850, will prove the resources which a body of Englishmen can develop within a very brief period, when located in a country favourable for their habitation, unfettered in their energies and industry. All the following salaries are paid from the taxes, voted and collected annually by themselves:—

Governor, £1,500; private secretary and establishment, £424; legislative and executive councils, £424; colonial secretary (£700) department, £1,844; treasurer (£500) department, £1,060; registry, £430; audit, £830; customs, £2,749; crown lands, £1,326; survey, £3,309; colonial engineers, £1,845; royal sappers and miners, £823; post-office, £3,342; harbour, £4,327; colonial storekeeper, £200; superintendent of cemetery, £50; out-stations, £1,445; police, £11,756; aborigines, £1,991; medical, £1,082; lunatic asylum, £579; supreme court (judge, £1,000) £1,992; insolvent court, £300; resident magistrates' court, £780; bench of magistrates, £150; sheriff's department, £1,565; advocate-general, £700; coroner, £220; colonial chaplain, £350. These sums are irrespective of £2,890, supplementary votes, about £30,000 for public works, and

* *Times*, 12th June 1850.

nearly £12,000 for miscellaneous expenditure.

A moiety of the money arising from the sales of crown lands is applied to immigration; the other moiety, styled the crown reserved moiety, is applicable to the survey, crown lands, and aborigines departments. Out of this moiety £15,000 was paid in 1848 and 1849, on account of the year 1848, towards the extinction of the colonial bonded debt, of which the interest, at five per cent., is paid yearly, out of the general colonial revenue.

The estimated expenditure of the land fund of South Australia, from April to December, 1849, was as follows:—

Amount of relief to the General Revenue to be charged to the Land-Fund . .	£7,971
For immigration	17,714
For public works	3,355
Towards extinction of the bonded debt of £84,000	17,950
For roads and bridges	7,659
For sundry small items	783
	£55,433
Which will be covered by an estimated revenue from lands sold	27,000
From licences and rents	1,875
Balance in hand	26,558
	£55,433

Greatly to the credit of the colonists, they have contributed liberally to the promotion of public works and improvements; under this head, the sums voted were, in 1846, £3,616; in 1847, £14,847; and in 1848, £28,789; and the estimated sum for the year ending 31st March, 1850, is upwards of £30,000. The cost of the Supreme Court-house is £6,000; the government-house, hospital, jail, police office, Resident Magistrates' court, and slaughter-house, would be creditable to any city in England. The expenditure from the British treasury for troops, or what is termed "military protection," was, in 1843, *nil.*; 1844, £4,000; in 1845, £3,700; in 1846, £3,750; in 1847, £4,000. The total cost for pay of troops and commissariat expenses for five years ending 31st March, 1847, was £15,890. There is a militia consisting of two troops of cavalry and one company of infantry, but it has not been called out since 1840, and there is no expense attending the force.

Banking Establishments.—South Australia has its own public bank, which is coeval with the foundation of the colony; there is also a branch of the *Austral-Asian*, and, recently, one of the *Union Bank of Australia*, has been placed at Adelaide. The *South Australian Bank* appears to be a well-conducted chartered company; it has a subscribed capital of £200,000, in shares of £25 each; upwards of £180,000 have been paid up. By the charter, there is a power of augmenting the capital to £500,000. The corporation is managed by a court of directors in London, and there is a local board of three directors at Adelaide, aided by a manager. The net profits of the bank at Adelaide and in London, for the year 1849–50, was £15,153; the dividend paid to the proprietors for the year, was six per cent. free of income-tax.

The bank averages for South Australia are thus stated since 1843:—

Liabilities.

Year.	Notes in circulation.	Bills in circulation.	Deposits.	Balance due to other banks	Total.
1843	£9,939	£3,314	£51,897	£793	£65,944
1844	11,027	1,890	55,348	787	69,054
1845	14,912	3,714	66,513	340	85,480
1846	23,224	5,008	91,848	1,451	121,532
1847	32,008	4,793	102,636	1,739	141,178
1848	40,937	5,826	118,563	241	165,568
1849	—	—	—	—	—
1850	—	—	—	—	—

Assets.

Year.	Coin.	Landed property.	Balances due from other banks.	Notes and bills discounted and all debts due to the banks	Total.
1843	£27,881	£8,139	£2,944	£186,067	£225,032
1844	32,492	7,867	3,055	181,121	224,537
1845	30,314	7,590	3,495	174,971	216,376
1846	69,238	7,226	2,707	196,480	275,652
1847	101,868	7,382	9,280	309,097	409,646
1848	88,620	10,440	7,194	367,765	474,021
1849	—	—	—	—	—
1850	—	—	—	—	—

The Coins in circulation are the gold, silver, and copper coins of Great Britain, which bear the same current value as in the United Kingdom.

On 31st December, 1848, the coin in the colony was estimated at £125,247; viz. in the Bank of South Australia, £57,573; Bank of Austral-Asia, 25,674; in treasury chest, £32,000; in circulation, £10,000. The weekly average amount of bank-notes in circulation is £48,371.

The course of exchange on London from

1st January to 23rd October, 1848, was two per cent. premium; from 23rd October to 31st December, 1848, four per cent. *On the colonies*, 1st January to 23rd June, two per cent. premium; from 23rd June to 31st December, one per cent., by the Bank of Austral-Asia; and by the Bank of South Australia, for same periods, three to two per cent. premium.

Weights and Measures as in England.

There is a well-managed *Savings' Bank* at Adelaide, which possesses the confidence of the public.

Commerce.—The rapid establishment of settled and profitable commercial intercourse between South Australia and England, affords a good proof of the value which the merchants, manufacturers, and shipping interest derive from the foundation of colonies where Englishmen can produce those articles which are in demand in the United Kingdom, and receive in exchange British manufactures. South Australia, that but a few years ago was a wilderness, has now a maritime trade in value little short of a million sterling.*

The following shows the imports and exports since 1839, shortly after the formation of the settlement, the years ending January:—

Year.	Imports from					Exports to				
	Great Britain.	British Colonies.	Foreign Countries.	Total.	Imports consumed in colony.	Great Britain.	British Colonies.	Foreign Countries.	Total.	Imports re-exported.
1839	£123,308	£200,325	£23,016	£346,649	—	£9,524	£6,515	—	£16,039	—
1840	151,026	124,874	27,420	303,320	—	15,699	16,380	—	32,079	—
1841	161,480	123,192	3,676	288,348	—	53,798	50,263	£589	104,650	—
1842	93,382	69,403	6,627	169,412	—	39,628	35,375	245	75,248	—
1843	58,479	47,024	3,595	109,098	—	53,987	26,138	730	80,855	—
1844	63,610	54,366	854	118,830	£105,993	64,787	28,451	2,020	95,258	£12,921
1845	103,797	75,848	5,174	184,819	168,160	97,600	41,075	9,783	148,459	16,658
1846	174,689	141,661	13,748	330,099	303,321	218,095	92,340	2,402	312,838	25,778
1847} 1848}	235,374	166,475	8,975	410,285	335,692	166,080	170,360	13,907	350,348	75,133
1849	177,428	196,236	10,662	384,326	346,130	334,977	167,215	1,875	504,068	38,208

Note.—The foregoing returns cannot be carried back beyond the year 1839, as the colonial records from which they have been compiled do not embrace any earlier year.

The shipping outwards, from the years ending January, 1848 and 1849, according to the Blue Books, was:—

Year.	Great Britain.		British Colonies.		Foreign States.		Total.		
	Number.	Tons.	Number.	Tons.	Number.	Tons.	Number.	Tons.	Men.
1848	30	10,940	152	28,275	15	5,101	197	44,316	2,575
1849	16	5,572	125	22,156	10	3,152	151	30,880	1,795

According to a return in the *South Australian Almanack* for 1849, the number of vessels entering *inwards* for five years, was, from—

Year.	Great Britain.	British Colonies.	Foreign States.	Total.
1844	6	60	2	70
1845	12	97	5	114
1846	20	111	11	142
1847	28	115	7	150
1848	35	170	10	215

Note.—The vessels registered according to law in the colony were, in 1848, 17—tonnage 1,548.

* It may not be irrelevant to mention for the benefit of those seeking information on colonial subjects—that it may be obtained with trustworthy accuracy at Saunders' Colonial Library, Charing Cross, where all the colonial newspapers are filed, the proprietor of that establishment having made the collection of colonial information a primary object. Mr. Henry Capper, formerly senior clerk to her Majesty's emigration commissioners, a gentleman of long experience, and connected with the early emigration to South Australia, has his office for shipping passengers, &c. to the colonies at Saunders' Colonial Library.

The value of imports for the year ending 5th April, 1849, was £471,526; of the exports, £485,922. Tonnage, in, for the year ending 5th April, 1849, 59,011 tons; tonnage, out, 53,327 tons. Value of staple produce exported during the year ending 5th April, 1849, £446,643 10*s.*

Staple Products.—I have shewn, in a previous page, the quantity of wool exported from South Australia (p. 618.) The quantity shipped from South Australia, for the following years was, in 1845, 1,078,559 lbs.; 1846, 1,473,186; 1847, 1,804,918; 1848,

2,329,134; 1849, (estimated) 2,500,000. The value of the wool exported is about £120,000, and of tallow, about £5,000. Tallow, which first appeared on the list of staple produce during the year ending 5th July, 1849, amounted to 2,168 cwt. Wheat, flour, barley, maize, and oats, are now becoming staple exports of the province; in 1843, the quantity of wheat and wheaten flour exported, was equivalent to 38,482 bushels; in 1847, to 169,490; and in 1848, wheat and flour were shipped to the value of £40,000. The wheat is of excellent quality; some may be seen at the *South Australian Company's* offices in London, with a larger ear and a longer stalk than any to be found in the United Kingdom. Eight hundred quarters of South Australian wheat were recently received in Mark-lane, weighing 63 to 65 lbs. per bushel, and sold for 53*s.* per quarter, when the price of English grown corn was much lower.

Leather, whalebone, oil, beef, live animals, gum, bones, dried fruits, and other articles, are now recorded in the export list, and to this list, doubtless, various items will probably be added. The value of the exports from South Australia for the following years was, 1845, £103,981; 1846, £190,669; 1847, £275,171; 1848, £354,907.

According to an official return printed by order of the house of commons, 5th July, 1850 (No. 511), the total imports of South Australia for ten years ending 1848, were valued at £2,643,847; the exports for the same period at £1,719,856: the shipping inwards was, in tons, 236,624. The quantities and values of the two staple products of the colony, wool and minerals, exported, are stated to have been thus:—

Year.	Wool Exported.		Minerals Exported.	
	Quantity in lbs.	Value.	Quantity in tons.	Value.
1839	—	8,740	—	—
1840	—	8,740	—	—
1841	641,825	36,226	—	£390
1842	661,191	29,749	—	—
1843	1,159,574	45,568	20	128
1844	819,897	42,770	442	6,437
1845	1,331,888	72,236	1,158	19,019
1846	2,042,195	106,510	6,609	142,231
1847	1,114,862	56,131	9,301	174,017
1848	2,170,793	98,582	17,006	320,624
Total	9,942,225	505,252	34,536	662,456

Note.—For the years 1839-40 the wool exported is not stated; nor does there appear to have been any exports of minerals during the same period. In 1842 a small quantity of lead and copper was exported, but no mention is made of its being the produce of the colony.

The largest article of export consists of metallic ores, of which the discovery is recorded in the chapter on the history of the province, p. 648. The discovery of a silver-lead mine, termed the Wheal-Gawler, was owing to the wheels of a heavily-laden dray passing over a "bunch" of the mineral cropping, through the surface;—the brilliancy of the fragments revealed the treasure possessed by the colonists. The first export was some lead ore, in 1841, to the value of £390. The exports have subsequently increased in the following ratio:—

Year.	Ores in tons.			Value.			
	Copper.	Lead.	Emery.	Copper.	Lead.	Emery.	Total.
1843	1	18	—	£23	£104	—	£127
1844	277	203	—	4,009	2,427	—	6,436
1845	664	273	—	10,351	3,133	—	13,484
1846	2,691	189	—	58,395	1,919	—	60,314
1847	6,921	60	—	142,060	580	—	142,640
1848	10,632	271	68	199,134	3,954	£700	203,788
1849	16,323	682	—	310,172	10,452	—	320,624

There are about thirty-five mines in South Australia, of which about one-half are in active working; they are all copper, except two, copper and lead; five, lead and silver-lead; and one, copper and gold. These mines are all within 100 miles of Adelaide, except two mines, which are close to available harbours. A special survey of 20,000 acres has been purchased in the neighbourhood of Mount Remarkable, with a view to mining operations; and mining explorations have commenced near Port Lincoln. To what extent the mineral resources of the colony may yet be developed, it is impossible to predict.

Thus, in the short space of seven years, and in a colony whose duration only doubles that period, the exportable produce in metals has been augmented from £127 to £320,624; from one ton of copper ore to *sixteen thousand tons*. Of the copper ore raised in the year 1848, there was exported to Great Britain, in value, £206,605; and of the lead ore, in the same year, to Great Britain, £3,215. India and China afford large and profitable markets for any quantity of copper or lead above what England may require. Iron ore and mineral iron exist in ponderous masses in various parts of the province: gold, in a black metallic-looking sand, has been found in the bed of the Torrens river; it is also said to exist, in considerable abundance, in other places, and one or two gold mining companies have been formed at Adelaide for the collection

of the precious metal. To afford some idea of the progress of mining operations in the colony, I subjoin a list of the mines in the colony at the close of the year 1848:—

Name.	Date of Formation.	Where established.	Capital.
Montacute Mining Company . . .	Mar. 1845	Adelaide	£5,000, in 1,000 shares.
South Australian Mining Association	16 April 1845	„	12,320, increasable to £20,000.
Princess Royal Mining Company . .	16 Oct. 1845	„	20,000, in 400 shares of £20 each.
Paringa „ „ . .	13 Nov. 1845	„	20,000.
Wakefield „ „ . .	1845	„	5,000.
Glen Osmond Union „ „ . .	20 Nov. 1845	„	30,000, in £10 sh. inc. to £50,000.
Australian „ „ . .	1845	London & Tungkillo	400,000, paid up £80,000.
Adelaide „ „ . .	16 May, 1846	Adelaide	10,000, in 2,000 shares.
North Kapunda „ „ . .	13 June 1846	„	22,000, all paid up.
Mount Remarkable „ „ . .	3 Nov. 1846	„	25,000.
Victoria Gold Mine	1846	„	20,000, in 10,000 shares.
Prince Albert „ „ . .	1848	„	5,000, in 1,000 shares.
Port Lincoln „ „ . .	3 May, 1848	Port Lincoln . . .	3,000, in 600 shares.
Barossa „ „ . .	1848	London	30,000.
Royal „ „ . .	1848	Adelaide	50,000, in 5,000 shares
Enterprize „ „ . .	1848	„	3,000, in 1,000 shares
Provincial Mining Association . .	Aug. 1848	„	6,000, in 1,000 shares.
Kapunda Mine	—	„	—
Wheal-Granger Mine	—	„	—
Wheal-Gawler „	—	„	—
Belvidere „	—	„	—
Kanmantoo „	—	„	—
Greenock Creek „	—	„	—
Adelaide Ore Smelting Company .	2 Dec. 1847	Near Albert Town .	10,000, in 400 shares.
Assoinga „ „ . .	24 May, 1848	Tothill's Gap . . .	—
Patent Copper „ „ . .	—	Kooringa, &c. . .	—

Note.—There are no particulars published where the dash is inserted.

All these companies, except the *Australian Mining Company* and the *Barossa Range Association*, have been established in the colony. The *Australian Company* has already received about 1,500 tons of copper, which average about thirty-five per cent. of pure copper. They have pushed forward the workings at their mines at Tungkillo with much energy, driven an adit to the extent of 180 fathoms, and laid down a tram-road of 150 fathoms. Steam power, pit work, and other machinery for three shafts, sufficient to take the mine down 100 fathoms below the adit, together with a general supply of mining implements and stores, have been recently sent out to the colony by the board of directors in London; and under the management of able officers, and with practical Cornish miners, the efforts of this spirited company will, it is to be hoped, reap an ample reward.

After the discovery of the Kapunda copper mine in 1843–4, by Captain Bagot's son and Mr. Dutton, the attention of the colonists was strongly directed to the subject, and at the end of 1844, and beginning of 1845, reports were rife in Adelaide, that a "monster mine" of untold wealth had been found by a shepherd: the precise locality was for some time kept secret; and after great exertions to raise £20,000 in Adelaide, owing to the depressed state of the province, two associations collected the required sum, and purchased 20,000 acres, by special survey, in the vicinity of the Razorback mountain and Burra creek, lat. 33° 40′ S., long. 13° 98′ E., eighty-five miles north by east from Adelaide. The two associations having lineally divided the property, apportioned it by lot, the northern half fell to those who formed the *Adelaide Mining Company*, and has been called Wheal-Grey; the southern half became the property of an association called the *Princess Royal Mining Company*.

The progress of that portion of the Burra-Burra mine termed the *South Australian Mining Company*, for three years ending 30th September, is thus shown:—

Particulars.	1846.	1847.	1848.	Total.
	Tons.	Tons.	Tons.	Tons.
Ore raised	6,359	10,794	16,231	33,386
Carted to P. Adelaide	2,726	6,963	11,731	21,421
Sold there	10	1,067	3,203	4,481
Shipped to Gt. Britain	2,453	5,370	7,588	15,413

The dividends paid from the produce of this mine are very extraordinary. *First* dividend, 24th June, 1847, *fifty* per cent.; amount, £6,160: *second* dividend, 8th July,

1847, *fifty* per cent.; amount, £5,160: *third* dividend, 18th August, 1847, *one hundred* per cent.; amount, £12,320: *fourth* dividend, 1st December, 1847, *two hundred* per cent.; amount, £24,640: *fifth* dividend, 1st March, 1848, *two hundred* per cent.; amount, £24,640; *sixth* dividend, 1st June, 1848, *two hundred* per cent.; amount, £24,640: *seventh* dividend, 1st September, 1848, *two hundred* per cent.; amount, £24,640. Total sum, dividends, in fifteen months, amounting to *one thousand* per cent. = £123,200, of which £119,850 have been actually paid. This prosperity continues.

In the half-yearly report (19th April, 1848) of the Burra-Burra mine, it was stated that there were 567 operatives engaged in raising and dressing the ore, and in other pursuits connected with their establishment: that in future, so long as the then satisfactory prospects continued, the directors proposed "paying dividends of two hundred per cent. on the capital stock, on the first day of every third month." The funds necessary to purchase the land in which the mine is situated were procured by issuing 2,464 shares, of five pounds each, the greater number of which are held by the colonists, and are now saleable at about one hundred and twenty pounds!

The following return, compiled from the Swansea ticketing papers, exhibits the produce shipped from the South Australian mines, during the years 1846–7 :—

Mines.	1846.		1847.	
	Tons.	Value.	Tons.	Value.
Burra-Burra . .	1,176	£20,684	4,351	£94,263
Kapunda . . .	831	16,726	1,480	27,769
Montacute . .	265	4,370	55	1,029
Kanmantoo . .	78	1,259	228	3,236
Paringa . . .	19	394	100	1,608
Princess Royal .	—	—	60	1,221
Total . .	2,369	43,433	6,274	129,126

The average price, per ton, obtained for the ores thus sold, was, in 1846, £18 7*s.* 2*d.*; in 1847, £20 1*s.*; but the heavy depreciation which subsequently took place in the copper market, very materially diminished the amounts realised for South Australian ore. The average cost of raising the ore, including every item previous to shipment, was about £6 sterling per ton; freight and charges to Swansea, £5 15*s.* per ton: leaving, at £20 per ton, more than £8 per ton clear profit. The formation of a tram-road from the Burra-Burra mine to the city of Adelaide, and of a railroad from the city to the port, as now proposed, will greatly reduce the cost of transit from the mine to the shipping, which is considerable. For instance, from September, 1845, to March, 1847, the cartage alone was £21,466.

The distance of South Australia from England has induced the colonists to direct their attention to smelting the ore at the mines, a company has been recently formed at Adelaide, and the Yatala smelting works are now in progress, at a convenient position between the city and port of Adelaide. Another set of smelting works have been constructed near the Burra-Burra mines, contiguous to an extensive forest, by Messrs. Walters and Williams, in connection with Messrs. Schneider and Co., of London, at a cost of £70,000. The Messrs. Thomas, a well-known and respected family from Cornwall, possessed of much experience in mining, have erected a copper smelting furnace near the South Australian Company's mine at Kanmantoo; other smelting establishments are in progress, including small furnaces for smelting lead; and, in a few years, no more of the poorer ores will be shipped from South Australia, by which a considerable increase of profit must accrue to the colony and to the mining proprietors.

The following is a comparative return of manufactories and works in the province of South Australia, from the years 1844 to 1848 :—

Description of Work.	1844.	1845.	1846.	1847.	1848.
Barilla manufactory .	1	1	1	1	1
Boat-builder	—	—	1	1	1
Boiling-down establishments	—	—	—	2	2
Breweries	9	18	13	15	14
Candle-maker . . .	—	—	—	1	1
Cloth and woollen manufactory	—	—	1	1	1
Coach manufactories .	2	3	4	4	4
Flour mills—Steam .	3	11	15	15	25
Wind . .	7	8	8	8	
Water .	2	3	1	2	
Cattle . .	4	2	2	—	
Foundries—brass & iron	3	4	2	2	2
Machine manufactories	4	5	5	4	4
Maltsters	—	10	2	2	2
Organ-builder . . .	—	—	1	1	1
Pottery	1	1	—	—	—
Salt-manufactory . .	1	1	1	1	—
Ship-builders	—	—	1	2	2
Smelting works . . .	—	—	—	—	2
Snuff and tobacco manufactories . . .	1	3	1	1	1
Soap and candle manufactories	4	4	4	3	3
Soap-makers	—	—	—	2	2
Tanneries	7	8	6	7	7
Water-works . . .	1	1	1	1	1

The return for the year 1848 is given from the Blue Book at the Colonial-office; but, excepting the works for smelting copper, there does not appear to have been any increase in the manufacturing establishments for the last few years.

The mechanics in the colony are said to be skilful workmen, and the machinery made is of first-rate character. Seven vessels of a small size have been built at Adelaide, and they are creditable specimens of naval architecture.

AGRICULTURE.—The neglect of this staple source of prosperity, during the early days of the colony, has been previously stated. Ample amends have since been made for this inattention; and the progressive increase of cultivation is shown in the annexed statement of the acres in cultivation from the year 1840 to 1848:—

Year.	Number of Proprietors.	Wheat.	Barley.	Oats.	Maize.	Potatoes.	Garden.	Vineyard.	Total.
1840	—	1,059	388	424	192	440	—	—	2,503
1841	—	4,154	897	501	714	456	—	—	6,722
1842	873	14,000	2,700	700	850	690	850	—	19,790
1843	1,300	23,000	3,300	790	290	470	840	—	28,690
1844	1,357	18,980	4,264	1,045	241	397	761	—	26,918
1845	1,209	18,838	4,312	1,485	86	459	63	—	—
1846	1,714	26,134	3,489	1,963	106	590	896	111	—
1847	1,837	25,920	5,840	2,946	161	381	993	198	36,440
1848	1,846	29,737	8,479	3,977	4,602	591	1,300	219	48,911

The estimated average per acre is—for wheat, 21 bushels; barley and oats, 25; potatoes, 4. The number of acres enclosed was, in the year 1847, 94,684; and in 1848, 125,643.

The state of each district is shown by the following account of the number of acres in crop in 1848, which shows that, on an average, each landed proprietor has about twenty-seven acres of land under cultivation:—

Districts in 1848.	Number of Landed Proprietors.	Wheat.	Barley.	Oats.	Maize.	Potatoes.	Garden.	Vineyard.	Total Acres.
Adelaide	978	12,744	4,949	2,517	4,579	211	819	171	25,990
Encounter Bay	39	577	81	11	10	12	15	2	708
Gawler Town	232	5,153	1,727	233	6	43	178	22	7,361
Mount Barker	388	6,834	960	767	4	289	187	18	9,058
Mount Remarkable . . .	20	95	20	171	2	16	32	2	338
Port Lincoln	18	45	17	28	—	3	12	2	107
Willunga	171	4,289	725	250	2	22	56	3	5,247
Total	1,846	29,737	8,479	3,977	4,602	595	1,300	219	48,911

Up to the 1st of January, 1849, the number of acres surveyed in South Australia was 465,943; add proportions for roads, 22,641; for the city of Adelaide and park, 3,400; total, 491,984. The number of acres selected was 159,188. In the surveyed lands, 198,997 acres were special; and of these, but 52,400 were selected.

The agricultural and horticultural products are similar to those of the Australian colonies previously described. The vine thrives well, and the product of wine and brandy is increasing.

South Australia was, on its foundation, in 1836–7, supplied with live stock from New South Wales and from Van Diemen's island. Large parties of "overlanders" arrived at Adelaide by travelling along the banks of the Darling, Murrumbidgee, and Murray rivers. The number of stock assessed for the years 1839, 1844, 1845, 1846, and 1847, was—

Year.	Horses.	Horned Cattle.	Sheep.
1839	800	7,600	108,700
1844	902	22,711	355,689
1845	1,044	26,146	480,669
1846	1,826	56,986	681,374
1847	1,705	56,375	784,811

Note.—The horses and horned cattle are above the age of six months, and the return of sheep includes weaned lambs.

The Blue Book for 1848 only contains returns for the Adelaide district, viz.—horses, 686; horned cattle, 55,083; sheep, 838,394. It is stated that there are now in the whole province—horses, 5,000; horned cattle, 70,000; sheep, 1,000,000; goats and pigs, 20,000. The increase of sheep is computed at twenty per cent. per annum.

In 1843–4, Mr. Ridley, an intelligent South

Australian colonist, invented a machine which reaped and threshed the corn at the same time. The machine is driven forward by two horses; at the fore end are six prongs, three on each side, which embrace the entire width of the wheel-track, and serve to collect the ears into the narrower range of teeth, which extend into a cylinder, in the form of a comb; between these teeth the neck of the straw passes, and the head or wheat-ear is guided into the lower cylinder, where it is caught by the "beaters," which make 600 revolutions per minute. The grain is beaten out of the ear, and thrown up a curve, whence it falls into the receiving-box, at the bottom of the cart, and the chaff flies off by a sort of chimney, at the upper and back end of the cart. This invention would only answer in a climate where the corn was so dry that it would separate from the chaff at the first blow of the beater. With two horses and two men, a farmer may thus reap and thresh a field at the rate of one acre per hour.

Prices in 1848.—Wheat, 4*s.* 6*d.* per bushel; barley, 4*s.* 6*d.*; oats, 4*s.*; maize, 3*s.*; potatoes, per ton, £3 10*s.* to £5; grapes, per lb., 2*d.* to 9*d.*; peaches, per dozen, 4*d.* to 8*d.*; melons, per cwt., 5*s.* to 6*s.*; apples, per lb., 5*d.* to 9*d.*; nectarines, per dozen, 6*d.* to 9*d.*; wheaten flour, per barrel of 196 lbs., 22*s.* to 29*s.*; wheat, per imperial bushel, 3*s.* 9*d.* to 5*s.*; wheaten bread, per lb., 1¼*d.* to 1¾*d.* Horned cattle—cows, £2 to £5; steers, £1 15*s.* to £3; working bullocks, £3 to £5. Horses, £15 to £20. Sheep—ewes, 4*s.* to 6*s.*; wethers (60 lbs.), 7*s.* Goats, 3*s.* to 5*s.*; swine, 6*d.* per lb.; milk, per pint, 2*d.*; butter, fresh, 1*s.* 2*d.* to 1*s.* 8*d.* per lb.; salt, 1*s.* to 1*s.* 3*d.*; cheese, 9*d.*; beef and mutton, 2½*d.*; pork, 6*d.*; rice, 3*d.*; coffee, 10*d.*; tea, 2*s.*; sugar, 3*d.* to 3½*d.*; salt, 1*d.*; wine, per dozen, 25*s.*; brandy, per gallon, 21*s.*; beer, colonial, per hogshead, £4 2*s.* 6*d.*; foreign, £7 to £8; tobacco, per lb., 3*s.* 6*d.*

Wages for Labour in 1848.—*Domestic*, male, £25 to £32 per annum; female, £14 to £22. *Predial*, £31 to £39 per annum.

Trades.—Bakers, 4*s.* to 5*s.* per diem; blacksmiths and wheelwrights, 6*s.* 6*d.*; bricklayers, masons, and plasterers, 7*s.* 6*d.*; brickmakers, per 1,000 bricks, 35*s.*; butchers, 3*s.* 6*d.* to 4*s.* 2*d.* per diem; bullock drivers, cabinet and carriage makers, coopers and carpenters, 7*s.* 6*d.*; saddlers, 6*s.*; shoemakers, 7*s.* 6*d.*; sawyers, per 1,000 feet, 9*s.* 6*d.*; shepherds, with board and lodging, average £31 4*s.* per annum; porters, per hour, 7*d.* to 8*d.*; farmers, 5*s.* per diem.

The colony is greatly indebted for its foundation (see p. 638), and for the interest which has been felt in England for its welfare, to an association termed the *South Australian Company*, which in June, 1850, held its fourteenth annual meeting, and declared a dividend of four per cent. per annum, free from income-tax. The objects of this company were, the purchase and improvement of lands, and their lease and sale, when so improved. It has also introduced improved breeds of stock into the colony, and worked some mining property. Meritorious efforts have been made for the construction of wharfs and warehouses at Port Adelaide, where ten ships may now load or unload, as if they were in the London Docks. The company seem now to be directing their more special attention to leasing land, of which they possess about 60,000 acres; offering it on the following favourable terms to settlers:—

"Engagements for leases for a term of twenty-one years, at very moderate rates, with a right of purchasing the freehold.

"The sections, as marked off by the government surveyors, contain either 80 or 134 acres; so that the farms will consist of 67, 80, 134 acres, or any larger quantity, as may be agreed on.

"The company's manager will point out five portions of freehold land, each equal to the quantity to be leased, and from them the tenant may select one. The yearly rent will be 4*s.* per acre, during the first period of seven years—5*s.* per acre, during the second period of seven years, and 6*s.* per acre, during the third period of seven years.

"In order to provide for the due cultivation of the farm, every applicant should possess a small amount of ready money, to be deposited (on signing the agreement) with the company, in London; and for which (without any deduction) an order will be given on their manager in the colony. The lease will stipulate, that the amount shall be expended solely in improving the land; and the lowest sum recommended to be thus deposited as farming capital, for a farm of 67 or 80 acres, is £150; and for a farm of 134 or 160 acres, £300. It is advisable, however, that every tenant should have, either from his own resources, or his friends' assistance, nearly as much capital besides, as he must incur expenses for outfit, reaching the ship, purchasing implements, freight of extra baggage and stores, &c., &c.; and ought to have a small amount available for use, on his landing in South Australia. To accommodate settlers possessed of limited means, the company will not object to two partners being associated in a lease, provided their respectability and other qualifications be ascertained; and should the tenant need assistance to erect farm-buildings, or to fence his land, the company will aid him with an advance proportionate to the capital expended by him on the farm, for which advance the rate of interest current in the colony will be charged.

"This advance, or loan, will be made after the approved expenditure upon the farm of the capital deposited by the tenant, and may be repaid by instalments; after repayment, the tenant will gene-

rally have a right, at any time during the lease, to purchase his farm, with all fixed improvements, The price of purchase will be specified in the lease, and will vary according to the period at which the right is claimed."

A clause is inserted in the lease, "giving the farmer, in the event of his being dissatisfied with all the portions of land offered him by the colonial manager, the option, within a specified limited time, of cancelling the engagement, on payment of the trifling expenses incurred."

The following is a summary of the revenue for the last year:—

Rental of the town property	£2,197
Ditto of port buildings, and receipts from wharf	5,650
Ditto of country lands	6,648
Profit on sales of land—town, port, and country	3,107
Net proceeds of wool	5,662
Sales of sheep to the butchers, including value of those killed for rations	1,839
Total	£25,105

The total current expenditure in the colony, exclusive of that connected with the mining operations, was as follows:—

Salaries and wages in Adelaide	£958	
Miscellaneous charges there	429	
		£1,388
On account of the sheep		5,229
Ditto of the town and port property and country lands		1,079
		7,697
The total amount of salaries and charges in London during this last year, including the income-tax, is	£1,691	
Interest on debentures, &c.	921	
		2,612
		£10,310

As population increases, and the prosperity of the colony is augmented, there will of course be a proportionate improvement in the value of the property of the South Australian Company.

The rental received by this company, for town, port, and country lots, during the past six years, has been—1844, £5,984; 1845, £5,988; 1846, £7,084; 1847, £8,542; 1848, £11,034; 1849, £14,496.

Present Position of South Australia.—The details given in the previous pages testify that this fine province, after passing through the ordeal of inordinate land speculations in 1836, '7, '8, '9, and of mining speculations in 1845, '6, '7, has now attained a sound position; and that its prosperity, at length established on a solid basis, may be reasonably expected to steadily increase.

The extraordinary height to which the land mania had arrived, may be seen from the following data. The injurious and enervating effects need no comment; it needed all the inborn energy of the colonists to bear up against them; yet they did so right manfully, and, by the blessing of God, with success.

Early in the year 1838, Mr. R. Fisher sold an acre in Gouger-street (No. 387) for £410; the original cost in March, 1837, was £8 10*s*. In 1839, Mr. T. Y. Cotter, sold half-an-acre (No. 144 in Grenfell-street) for £755. The cost of the acre lot, in the previous year, was about £10. Mr. D. Macfarlane purchased one acre from Sir James Malcolm, in Rundle-street, nearly opposite Messrs. Russell and Freeman's warehouses, and having upon it buildings over-estimated at £500, for the sum of £2,000. Mr. Thomas, the government printer, sold one of his 137 acre sections, on the Torrens, about three miles from Adelaide, for £1,300 cash; the section cost him £80, in 1836. Mr. Flaxman sold, to the German community of Klemzig, 2,000 acres, of a special survey on the Para river, for £20,000. Suburban sections, at Hindmarsh and Walkerville, which sold in July, 1838, for £10 an acre, brought, in 1839, from £45 to £100 per acre. Even at Port Lincoln, allotments, that cost the previous year £20, sold for £120; and £300 were refused for half an acre water frontage.

The bubble of high prices for land burst, and the people betook themselves to the steady pursuits of industry. They cultivated the soil, obtained ample returns for their labour, but found no market for their surplus produce. In 1844–5, copper and lead ores were discovered, and a mania arose for mining operations, by which many have suffered considerably, and were obliged to sell their lands. The following is a return of the amount of mortgages on land registered during the years 1844, '5, '6, and '7:—

Lent on	1844.	1845.	1846.	1847.
Town lands	£1,155	£5,434	£5,089	£6,203
Country lands	13,860	6,997	30,651	27,308
Town & country lands	5,022	30	1,500	529
Total	20,038	12,462	37,240	34,041

The liability by bills of sale, judgments, and warrants of attorney, registered during the years 1844, '5, '6, and '7, was—

Securities.	1844.	1845.	1846.	1847.
Judgments	£532	£994	£10,478	£20,412
Bills of sale	16,395	12,983	49,659	22,229
Warrants of attorney	5,206	9,783	10,741	939
Total	22,133	23,761	70,879	43,581

The number and nature of writs which passed through the sheriff's office during the years 1844, '5, '6, and '7, were—

Nature of Writs.	1844.	1845.	1846.	1847.
Capias ad satisfaciendum	11	20	14	10
Capias	10	6	11	13
Fieri facias	22	30	24	28
Habere facias possessionem	—	1	—	3
To levy fines	1	—	2	2
Habeas corpus	1	—	—	—
Attachment for contempt	1	—	3	—
Total	46	57	54	56

The following is a return of the number of fiats in insolvency issued in the province of South Australia during the years 1844, '5, '6, and '7 :—

On Petition of	1844.	1845.	1846.	1847.
Creditors	2	1	—	2
Imprisoned debtors	8	13	6	12
Debtors at large	—	12	10	7
Total	10	26	16	21

All accounts now represent a more steady industrial progress in mining, as well as in agriculture; and I doubt not that every succeeding year in which the facts may be registered, in continuation of the accompanying comparative tabular view of the state of the province, will exhibit yet more remarkable evidences of the welfare of this promising section of the British empire.

General Condition of South Australia at the close of each year since 1840.

In the Years	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.
Inhabitants in the Province	14,610	..	..	17,366	18,999	22,390	25,893	31,153	40,778	50,000
Do. in Municipality of Adelaide	8,489	..	..	6,107	..	7,413	..	..	..	..
Do. Rural Districts	6,121	..	..	11,259	..	14,977	..	..	..	..
Public houses in Adelaide, Port Adelaide, and Albert Town	70	67	44	34	37	45	58	66	..	..
Do. in the Country	37	38	37	33	33	40	60	66	..	..
Convictions for crimes and misdemeanours	47	37	36	31	21	22	40	31	53	..
Flour Mills	..	..	..	16	21	24	26	25	25	..
Manufactories	4	..	..	31	35	59	44	51	..	..
Acres in Cultivation	2,503	6,722	19,790	28,690	26,918¾	26,218½	33,292½	36,440¼	48,917	..
Value of Exports of Colonial Produce in £	15,650	31,826	29,079	66,160	82,268	131,800	287,059	275,115	465,878	374,156
Amount of Government Expenditure in £	169,966	104,471	54,444	29,842	29,453	32,099	37,207	58,979	80,129	82,638
Do. Revenue in £	30,199	26,720	22,074	24,142	27,878	36,182	48,017	67,027	82,847	94,200

Note.—In 1849 the immigrants to the colony were:—from Great Britain, 12,501; British Colonies, 2,038; Foreign Countries, 1,627—total, 16,166. Departures from the colony to Great Britain, 131; British Colonies, 2,393; Foreign Countries, 170—total, 2,694.

It may here be observed, that in some returns, the proceeds of the land sales are included as revenue, in others they are excluded. In the statement at p. 695, the land revenue is excluded. A document laid before Parliament on the 5th July, 1850 (No. 511), gives the undermentioned financial statement of the expenditure for nine years ending in 1848 :—

Shipping at Adelaide in 1849.

Countries.	Inwards.		Outwards.	
	No.	Tons.	No.	Tons.
Great Britain	95	46,507	25	9,747
British Colonies	165	28,173	209	51,738
Foreign States	17	5,988	38	13,812
Total	277	80,623	272	75,297

Year.	Ordinary Revenue (fixed and incidental.)	Bills drawn on her Majesty's Treasury.	Bills on the Colonization Commissioners.	Proceeds of other Bills.	From Land Sales.	Loans and Transfers from Land Fund.	Total.
1840	£31,879	—	£129,273	£4,990	—	£9,955	£176,097
1841	28,550	£27,154	23,853	3,000	£2,602	5,692	90,851
1842	25,034	36,607	—	—	17,830	—	79,471
1843	24,779	6,252	—	—	411	200	31,642
1844	27,879	2,475	—	—	—	3,587	33,941
1845	35,574	—	—	—	—	15,609	51,183
1846	48,018	—	—	—	—	—	48,018
1847	67,028	—	—	—	—	—	67,028
1848	82,912	—	—	—	—	—	82,912

BOOK V.—WESTERN AUSTRALIA.

CHAPTER I.

POSITION, AREA—AND EARLY HISTORY OF SETTLEMENT.

This division of Australia, generally known as the "Swan River" colony, comprises all that portion of the island-continent situated to the westward of the 129th degree of E. long., and extends between the parallels of 13° 44′ and 35° S.; is bounded on the south by the Pacific, on the west-north-west by the Indian Ocean, on the north by the Arafura Sea, and on the east by the meridian line above-named. The length from north to south is computed at 1,280 miles, and the breadth from east to west at 800 miles; the area is about 1,000,000 square miles, or more than eight times the size of the United Kingdom of England, Wales, Scotland, and Ireland.

History.—The "Swan River Settlement" has been a bye-word and a reproach, frequently cited by the advocates of the so-called Wakefield system to illustrate the evils of a different plan of colonization, while defending themselves from the blame so unsparingly bestowed upon them during the period of distress and depression under which South Australia laboured. In the previous book I have expressed my conviction, founded upon the facts therein stated, that the latter colony could not, either in its prosperity or its adversity, be fairly used as a general argument on one side or the other; it remains to be seen whether the Swan River settlement in its turn presents any tenable ground for the sweeping assertions in support of which it is adduced, mainly on the score of its having been "*a complete failure*."

Even were this the case, it would not necessarily follow that the original plan was the sole cause of so unfortunate a result; for the grievous errors and inconsistencies by which the practical working of the most carefully-framed human system may be perverted, and the very existence of a colony endangered, is painfully evident in the early history of too many British colonies, though counterbalanced by the energy, the industry, and the sound principles of government apparently inherent in the minds of the settlers themselves.

In the present instance a succinct account of the history of the Swan River settlement will furnish data on which to found an opinion of how far the stigma attached to it as a total failure is really merited, and the causes to which that failure, or, on the other hand, the slow advances which it is admitted, even by its best friends, to have made, can be fairly attributed.

The term *Swan River* was given to this portion of Western Australia by Vlaming, a Dutch navigator, who discovered it in 1697, and found in the neighbourhood many black swans. In 1801, the French corvette *Naturaliste* visited this coast, and M.M. Bailly and Heirisson, on 17th June, entered the river Swan in a cutter, observed large flocks of black swans, pelicans, and parroquets, and were surprised, after three days' explorations, with the forests and geological formation of the country.

Public attention was first directed in England to Western Australia by Captain (now Sir James) Stirling, R.N., who, when in command of H.M.S. *Success*, made a report, dated the 18th of April, 1827, pointing out the advantages of our occupying this portion of that vast island, and thus prevent the execution of a project then entertained by the French government for the formation of a Gallic Australian settlement.

Early in the year 1829, Captain Freemantle, R.N., of H.M.S. *Challenger*, hoisted the British flag near the entrance of Swan River, and took formal possession of the territory on behalf of the British crown, in the name of his Majesty George the Fourth. A portion of the country now included in the limits of Western Australia, situated on the south coast, and termed King George's Sound, was occupied in 1825–6, by a detachment of troops and persons sent from Sydney under the command of Major Lockyer. This detachment was withdrawn in the year 1830–1.

It was generally understood that his Majesty's government would not undertake

at the public cost the formation of a settlement on the western coast, a proposition was therefore made on the part of Thomas Peel, Esq., Sir Francis Vincent, E. W. Schenley, Esq., and others, to further the views of government in founding a colony at little or no expense to the mother country. These gentlemen offered to provide shipping for the conveyance of 10,000 British subjects within four years from the United Kingdom to the Swan River, furnished with provisions and every other necessary, and to maintain three small vessels running to and from Sydney, as occasion might require. They estimated the cost of conveying this number of emigrants at £300,000, or £30 per head, and required in return an equivalent grant of land at the rate of 1*s.* 6*d.* an acre, making 4,000,000 acres, out of which they would engage to provide every male emigrant with no less than 200 acres of land, rent-free. This project fell to the ground owing, I believe, to the inability of the proposers to satisfy the government as to the adequacy of their means of carrying it into effect, and another plan for the execution of the same object was issued in December, 1828, from the Colonial-office, of which department Sir George Murray was then the chief.

According to this project no expense was to be incurred by the government, either in conveying emigrants, or supplying them with provisions on their arrival; but intending settlers reaching Swan River before the close of the year 1830, were to receive in the order of their arrival allotments of land, rent free, at the rate of forty acres for every sum of £3, which they could prove themselves to the satisfaction of the Lieutenant-governor, prepared to invest in the improvement of the land. Those who should incur the expense of taking out labouring persons were to be entitled to an allotment of land, at the rate of 200 acres, considered equivalent to £15 for the passage of every such person, without reference to any other grants of which they might become possessed. In the class of "labouring persons" were included women, and children above ten years old. With respect to the children of labouring people under that age, it was proposed to allow forty acres for every child above three years old; eighty acres for every child above six years old; and 120 for every child above nine, and under ten years old.

The title to the land was not to be granted in fee simple, until the settler had proved, to the satisfaction of the Lieutenant-governor, that the sum required (viz. 1*s.* 6*d.* per acre), had been actually expended in some investment, or in the cultivation of the land, or in solid improvements, such as buildings, roads, or other works of that kind.

Any land, thus allotted, of which a fair proportion, at least one-fourth, should not have been brought into cultivation, or otherwise improved, to the satisfaction of the local government, within three years from the date of licence of occupation, was to be liable to one further payment of 6*d.* per acre for all the land not so cultivated or improved, into the public chest of the settlement; and, at the expiration of seven years more, so much of the whole grant as should remain in an uncultivated or unimproved state was to revert absolutely to the crown. Every grant was likewise to involve the condition, that, at any time within ten years from the date thereof, the government might resume, without compensation, any land not then actually cultivated, or improved, as before-mentioned, which might be required for roads, canals, or quays, or for the site of public buildings.

Under the head of *investment of capital*, his Majesty's government agreed to include stock of every description, labourers, provisions, all implements of husbandry, and other articles applicable to the purposes of productive industry, or necessary for the establishment of the settler on the land; the amount of any half-pay or pension receivable from his Majesty's government was also to be considered as so much capital. After the year 1830, land was to be disposed of to those settlers who might resort to the colony on such conditions as his Majesty's government might then determine.

Mr. Thomas Peel, aided, to the extent of £20,000, by the late Mr. Solomon Levy (then of the firm of Cooper and Levy, of Sydney and London), undertook the responsibility of making the first efforts for the foundation of the colony. Mr. Peel was to receive 250,000 acres, on condition of taking out 400 emigrants, with liberty to extend the grant to 1,000,000 acres, previous to the year 1840, by receiving 40 acres for every child above three years, 80 for every child above six, up to ten years 120, and exceeding that age and upwards 200 acres for each person conveyed to the colony.

Colonel Latour also availed himself of the governmental terms, took out settlers stock,

&c., and became entitled to a tract of land of considerable extent.

At the first glance it may appear that this extensive tract was granted on very easy terms, but it will not be thought so when the circumstances of the case are duly considered. The estimated cost of the conveyance of an adult from the United Kingdom to the west coast of Australia was then about £30; no supplies were procurable on the spot, and the distance from Sydney (1,134 miles), together with the difficulty of doubling the south-west coast from the eastward for six months in the year, rendered the establishment of a colony at the Swan River twenty years ago an extremely expensive and arduous undertaking, and a very different matter to the creation of settlements at Port Phillip and Adelaide eight years later. To these latter places it must be remembered that sheep, cattle, and horses were driven overland at a comparatively small cost from the southern pastoral districts of New South Wales by the same route, and by a short sea voyage from Van Diemen's land; surplus labour was also obtained from the older colonies, whereas stock brought into Western Australia was necessarily imported by sea, and it was estimated that each sheep, including freight, insurance, and allowing for losses, cost the colonists £20.

By the exertions of Mr. Peel, of Colonel Latour, and other gentlemen, his Majesty's government was enabled to announce that a settlement would be formed on the west coast of Australia; Captain Stirling, R.N., was appointed civil superintendent, with authority to select a grant of land for himself to the extent of 100,000 acres; and early in the year 1829, a number of emigrants left England to form the new colony. The government of that day were certainly to blame for the want of forethought which marked this stage of the proceedings; no survey of the land had been made, nor any inquiries as to its resources; no system was organized, no public or corporate body in England was responsible for the due management of the expedition, and the consequences of these omissions were most distressing. Not even a secure anchorage had been ascertained. The settlers were landed on the beach, in mid-winter, in the neighbourhood of a bare limestone rock, the country around devoid of agricultural or pastoral capabilities, but filled with hostile savages. The settlers began to arrive in the middle of the year 1829,* and by the end of the same year, twenty-five ships had reached the new settlement; the number of residents were stated to be, 850; of non-residents, 440; number of cattle, 204; of horses, 57; of sheep, 1,096; of hogs, 106; and the value of property giving claims to land, was quoted, during these few months, at £41,550; the value of cargo left by ships, up to the end of December, was £50,428. In 1830, the number of immigrants increased; in January, 6 vessels arrived; February, 5; March, 4; April, 1; May, 6; July, 2; August, September, and October, each, 1; November, 2; and December, 1 = 30. The number of settlers brought by these ships was, 1,125; and the cargo left at the new town of Freemantle by them, was valued at £144,177. In 1831, the arrivals were less frequent, and the vessels numbered only 17; and after the first quarter, 1832, the immigration of persons and property ceased, except so far as related to the friends and funds of persons previously established in the colony. During this period, the amount of property introduced into the colony by the immigrants, on which applications for land were based, amounted to £120,000, and consisted of live stock, implements of husbandry, provisions, wearing apparel, furniture, and other goods.

Officers of the army and navy, and the officers on the civil establishment of the colony, were authorized by Sir George Murray to receive assignments of land on the terms of importation of property which were open to the public. To some naval and military officers who engaged to return to the settlement at an early period with the property necessary to qualify them to receive allotments, permission to select land was granted, and the territory so selected was *reserved for a considerable period.* Thus, many of the settlers who arrived in 1829 and 1830, on expressing a desire to possess themselves of lands in favourable localities,

* On the 1st June, 1829, the *Parmelia* transport arrived at Swan River, with Captain Stirling as chief, and several of the government officers for the new colony. On the 8th June, H.M.S. *Sulphur* arrived, with a detachment of H.M. 63rd regiment, under the command of Captain Irwin. On the 17th, the first public proclamation was issued, and the appointments of the official authorities notified. In August the *Calista*, *St. Leonard*, and *Marquess of Anglesea* arrived, with colonists, stock, and merchandize. In October nine vessels reached the Swan River, with settlers and stock; in November, two ships; and in December the *Gilmore*, with Mr. Peel and 170 passengers.

conformable to the amount of property then in their possession, were informed, "*that* ten thousand acres is reserved for Captain A.; *that* six thousand acres to Lieutenant B.; *that* five thousand acres to Mr. C.;" and so on, over the best situated applotments. Between June, 1829, and the close of 1831, the quantity of land assigned to or reserved for, civil, naval, and military officers, was as follows:—*Civil,* 19 persons, 162,062 acres; *naval,* 16 persons, 33,680 acres; *military,* 11 persons, 30,862 acres. There were also reservations for 15 private individuals, of 60,880 acres.*

Thus nineteen of the civil servants of the crown, selected and reserved for themselves, naturally out of the best lands, applotments which averaged to each about 8,530 acres.† In this list the governor (Sir James Stirling) stands marked for 100,000 acres, which he received by special award from Sir George Murray, then her Majesty's secretary for the colony. This immense grant was selected in different places, and is stated to have been shifted from time to time, according to the prospective value of new positions.‡

The colonial secretary received 5,066 acres; harbour-master, 7,592; colonial surgeons, 5,000 each; colonial naturalist, 5,000; storekeeper, 5,000; surveyor-general, 5,600; collector of revenue, 5,000; colonial chaplain, 5,020; civil engineer, 4,400; draftsman, 2,560; clerk in survey office, 1,280; and a Captain Butler, whose name appears among the civil officers, 2,560 acres. It is presumed that all these civil officers brought property into the colony, in conformity with the official regulations.

Among the naval grantees were the names of Captains Dance, of H.M.S. *Sulphur,* and Freemantle, of H.M.S. *Challenger,* each 5,000 acres; and Sandilands, of H.M.S. *Comet,* 2,560 acres. Lieutenants, mates, masters, and surgeons of those vessels had grants appropriated to them, varying from 1,280 to 3,840 acres. None of these gentlemen could, of course, leave their ships, and most of the grants were reassigned, or remained unoccupied and unassigned.

Among the military grantees were captains Irwin and Mackie, of the 63rd regiment, 10,000 acres; Deputy Assistant-commissary-general Lewis, 5,012 acres; Lieutenant Dale, 63rd regiment, 448 acres. Among the private individuals, for whom 60,880 acres were reserved, was the name of Mr. Gellibrand, for whom 10,000 acres were reserved, on the promise of his importing into the colony a sufficient amount of property to entitle him to the selection. The other reservations varied from 3,000 to 9,000 acres. Moreover, in the years 1829, '30, and '31, there were reserved for townships nearly 100,000 acres (98,590). For the town site of York alone, 38,400 acres were reserved; for Plantagenet, 17,000; for Clarence, 7,680; for Perth, 3,840. London, with upwards of 2,000,000 inhabitants, does not cover, probably, more than ten square miles = 6,400 acres.

With these antecedents, it would have been difficult for men§ unconnected with government, and unaided by public support,

* See Parliamentary Paper, No. 685, of 6th August, 1838, for details.

† It is said that the colonial authorities of 1829 gave the official servants of the crown who went out to found the Swan River colony, profuse grants of valueless lands, as compensation for the small salaries awarded to them.

‡ It is, however, due to Sir James Stirling, who possesses a high character in his profession, to state that great credit is due to him for the manner in which he surmounted the errors committed in the early proceedings of the colony. After the first disasters, he infused a new spirit into the desponding settlers, and it is mainly owing to his perseverance and unconquerable determination to succeed, that the place was not utterly abandoned.

§ Mr. Peel was ruined by his exertions to promote the establishment of the colony, at its commencement, and on 31st March, 1847, he was still in debt to her Majesty's government, £3,828, incurred by introducing a valuable body of men into the settlement. In 1847, the acting governor, with a view to the liquidation of part of this debt to the crown, agreed to accept the surrender of a block of land of 1,372 acres, at 20*s.* per acre = £1,372, which was contiguous to the town site of Rockingham; the said block containing the deepest water-frontage in Mangle's bay, on which the town is situated. Major (now colonel) Irwin, who has laboured zealously for the benefit of Western Australia, gives Mr. Peel credit for introducing men of good conduct, who were well acquainted with farming pursuits and handicrafts, and for bringing into the colony, towards the fulfilment of his contract, a population of 300 souls, with a property of £50,000.

Another instance of great hardship is recorded in the correspondence of the colonial office. Captain Bannister, formerly high-sheriff of Van Diemen's Island—an officer of great energy and considerable talent—accomplished, in 1831, after enduring much danger and privation, an exploratory over-land journey, in seven weeks, from Perth to King George's Sound; yet this gentleman declares himself to have been driven from the colony by the unjust treatment he experienced regarding the land allotments. A Mr. William Wise introduced property into the settlement to the amount of £1,984 (irrespective of ready money, which gave no claim for land,) and accordingly, under the regulations of December,

to have formed a colony, even in the loveliest and most fertile land on earth; and it is surprising that the attempt was not abandoned in the outset. The frightful struggles, which the settlers of 1829–30 had to undergo, are described in a "monster address," signed by nearly every non-official settler (including the magistracy, &c.), and presented to the governor of Western Australia, by a deputation of the leading gentry, in the presence of the members of the Executive and Legislative Councils. This address was transmitted by the governor to Earl Grey, and may be found at length in the Parliamentary Emigration Papers for 1849–50.

The grievances therein complained of, deserve mention, not only as forming a chief cause of the slow progress made by the colony during ensuing years, but also as affording a valuable example of what *should and should not be done* on similar occasions. The errors in this case appear to have arisen chiefly from sheer carelessness, and the most unaccountable want of forethought on the part, it would appear, of all concerned. Had the proposal been to colonize one of the Channel Islands, instead of to form a settlement in the southern hemisphere, matters could hardly have been taken more easily.

The manner in which the terms for the grant of land were framed rendered its acquisition dependent on arrival in a stated time, and induced the emigrants to bring out in excess servants, live stock, machinery, &c., of which each took more than he required. The season selected for their arrival, in a country known to contain hostile natives, was the month of June (there mid-winter). Not a shed had been provided for their reception; not an acre had been surveyed; and, as before stated, even a safe anchorage had not been ascertained. Several ships were dashed to pieces on the beach, which was crowded with masses of human beings — families with infant children, ladies, civil officers, sailors, soldiers, and farmers; while blood and cart horses, milch cows, prize bulls, sheep, goats, poultry, pigs, pianofortes, ploughs, mills, barouches, casks, furniture, bedding, tools, and seed-corn lay heaped together, drenched with torrents of rain.

The confusion was complete; the leaders of the enterprise were equally at a loss with the settlers to know what to do or advise. Some demanded to be led to their lands; others gave way to despair: servants attacked the spirit-casks; masters followed their example.* The farmers were told they must wait, *wait* till lands were dis-

1828, was officially informed by the colonial secretary, that he "had entitled himself to a grant of land to the extent of 26,453 acres." Mr. Wise received his "location order," which cost him, in actual outlay, £1,001 5*s.* 9*d.*; there was no surveyed land of which he could make sure, and after the waste of the substantial property he had introduced into the colony, Mr. Wise, for the sake of his family sold his "location order" to Captain Bannister, and proceeded to Van Diemen's Island. But from that day to this, Captain Bannister has never been put in possession of the land to which he had thus become entitled, and most probably will never receive an acre or a shilling for his property.—(See correspondence with the Secretary of State for the Colonies in 1836-7.)

* The following extracts from the address before alluded to, paint in glowing language a vivid, but, it is to be hoped, somewhat exaggerated picture of the suffering which attended the foundation of the Swan River settlement:—

"The entire material of a settlement, the official staff, settlers, property, and live stock, were hurried out to an unknown wilderness before one acre was surveyed, before one building had been erected, before even a guess had been formed as to the proper scene of their labours, before the slightest knowledge had been obtained of the soil, climate, products, or inhabitants. Nay, further, it was absolutely made a condition of the grants of land, that the emigrant should not only arrive, but bring his family, dependents, and property, into the colony while in this state.

"The ghastly spectacle of the town-site of Clarence —its sole edifices crowded, hurried, and neglected tombs—its only inhabitants corpses, the victims of disease, starvation, and despair — the sea-beach strewed with wrecks—the hills and borders of the rivers studded with deserted and half-finished buildings—bear witness to these consequences, and speak of brave men, delicate females, and helpless children, perishing by hundreds on a desert coast from want of food, of shelter, and even of water, and surrounded by armed hordes of angry savages. It were wholly impossible, sir, to estimate the vast amount of property of every sort buried for safety in the sands of the shore, and never again recovered, or the multitude of most valuable and high-bred stock of all descriptions, whose skeletons whitened the beach or filled the morasses they had been forced to enter in the desperate search for even fresh water. Can we wonder, then, that thousands rushed from such a scene with the relics of their capital, to people other colonies; or even that numbers sat down in the frenzy of despair beside the spirit-cask, never to rise from it alive? Can we wonder that the name of Swan River should, throughout the civilised world, become identified with failure and ruin, and that the survivors of such carnage should be left alone by their fellow-men to carry on an enterprise so dreadfully begun? Or may we not rather indulge in a justifiable pride in the resources of a country and the energies of a people who, from such a commencement, have, under Providence, elaborated even the civilization which your excellency may already see around you? But these terrible scenes, brought on by the unjustifiable attempt

covered, and then *wait* until they were surveyed. In fine, a quarter of a million sterling of property was destroyed; the means of the immigrants dissipated; their live stock perished; many died; and numbers, as soon as practicable, fled from this scene of ruin, carrying with them the wreck of their fortunes. I have been assured by a colonist of high character, and holding an official position, that fifteen years elapsed before the surveys were sufficiently advanced to enable a settler within five miles of the capital to put up a boundary fence.

Mr. James Walcott, one of the first settlers, says—"I was, in common with many others, a severe sufferer, from the fact of the government being unable to redeem its pledge to the colonists arriving in 1829 and 1830 at the Swan River settlement. It was not till several months after my arrival that I was offered a very small grant on the Swan, by the local government, and then only in consequence of its being vacated by another party. In the mean time most of the stock imported had died at Freemantle, where there was no keep for them—in fact, of actual want. I may say, with safety, that one-half of the property I imported was sunk before I could get a location which offered any prospect of success."

Subsequently, when the few, after gallantly penetrating the forest, and discovering good farm lands, had raised the drooping spirits of the rest, and a chance arose that a fresh body arriving, with new capital and stock, might do well, the land terms were changed to the same as the old-established colony of Sydney, where no hazards were to be run. Almost at the same time companies arose to push forward other colonies, each one naturally vaunting the advantages of its own, and disregarding, if not disparaging the merits of the rest; and the neglected little settlement of Swan River was soon forgotten, and left to establish the foundation of an infant nation unaided by aught but the resources of its country and climate, and its own patient but over-taxed energies. The effect of the non-arrival of fresh immigrants in a colony so peculiarly constituted may be readily conjectured. The hired labourer rapidly acquired the means of working on his own account, and became desirous in his turn of obtaining assistance, and the ruin of those who depended upon hired labour was the consequence. And here lies the secret of the so-called failure of Swan River. In one, and in only one, respect has it really failed, and that is in attracting emigration; in almost every other it has succeeded. Its trade has increased, crime among the Europeans is almost unknown, *and its present—who are in general its original settlers*—have in proportion to their numbers, effected a creditable extent of tillage, and evinced a very praiseworthy spirit.

Every one at all practically acquainted with the subject of emigration, is aware of the immense influence exercised by the powerful London companies in favour of the colonies in which they are respectfully interested. Is it, then, strange that the Swan River settlement, unconnected with the government, and unsupported (excepting for a brief period by the Western Australia Company) in the mother country, should have proved incapable of attracting the stream of emigration which it was the object of so much combined exertion to direct elsewhere? Besides, the miseries endured at the foundation of the colony, naturally gave rise to a strong prejudice in its disfavour.

To return to the proposition stated at the commencement of this chapter, this present instance would appear to be one of the many in which the error lies not in the system itself, but in the absence of the needful preparation, as well as careful supervision necessary to its successful working. Any colony, *equally neglected at home*, and

to hurry a colony into existence before steps had been taken for its security, are far from being the termination, or even the most injurious, of the errors which have plunged us into our present difficulties. At the very time when the unhappy immigrants were crowding on the beach, wasting and losing all their means, the conditions of their immigration told them that they had but a limited time to select and improve their grants. And more monstrous still, this time was actually expired before these grants were surveyed.

"A minor, but yet very ruinous error, consisted in limiting the investments of capital, which produced a vast accumulation of the same articles, and total want of others, and of money. The majority of the imported articles could not be of use for some years, and each settler was induced to bring more than he required, in hopes of sale. The want of storehouses caused the destruction of all these. As if sufficient means had not been used to destroy our capital, the system of location duties was added; by which the settler was compelled to prove that he had wasted 1*s.* 6*d.* per acre in permanent improvements. The result was, the erection of multitudes of cottages, fences, &c., in remote, and at the time, wholly uninhabitable places, which were, of course, allowed to become the prey of the elements, as soon as the expensive farce had been performed."

founded with as reckless improvidence with regard to surveys and shelter, and preliminary preparations, must, like Swan River, have been crippled, if not crushed, whether established on the "sufficient price" or any other system. Even the large grants of land referred to in a previous page, would not in themselves have proved injurious but for the imprudence of the authorities in not requiring sufficient security for the fulfilment of the annexed conditions; even as it is they appear to have exercised in some respects a favourable effect by giving a motive for continued exertion much needed under the circumstances.

It is pleasing to know, as will be shewn in the concluding observations on the colony, that the stationary state is passed, the development of the resources of the territory has commenced, and the tide of immigration is now setting in towards Western Australia.

With respect to the announcement relative to the disposal of crown lands in Western Australia, from the Colonial-office, December, 1828, 13th January, and 3rd February, 1829, granting land on certain conditions (see page 710) new regulations were issued from the Colonial-office, Downing-street, 20th July, 1830, by which 100 acres, valued at £15, were allowed for every labourer, including women and children above twelve years of age; 60 acres for every child between twelve and six years of age, and 30 acres for every child under six years of age. Lands allotted, if unimproved, to the extent of 3*s.* per acre, in two years, to be liable to quit-rent of 1*s.* per acre; if still unimproved in two more years, to revert to the crown, or be subjected to a higher quit-rent. The proportion of "capital," *i.e.* of stock, implements of husbandry, &c., which qualified settlers to receive land, was raised from 1*s.* 6*d.* to 3*s.* per acre. Subsequently the land sales' regulations adopted for the older Australian colonies were declared to be in force in Western Australia, where land is now only purchaseable from the crown at the minimum upset auction price of 20*s.* per acre. This high price has proved effective for the prevention of the sale of crown lands, for according to the evidence of Mr. Lefroy (an intelligent Swan River settler), before the House of Lords, 24th March, 1848—"There were in 1844 certainly quite a million of acres in the colony which could have been purchased for 3*s.* an acre." Much of this was probably poor land; and her Majesty's government, in a spirit of equity, gave the original grantees, who had taken up injudicious and sometimes unavoidable allotments, an opportunity of exchanging *three* acres of bad land for one acre of good land. These "remission tickets" were stated in 1848 not to exceed £4,000 in value. The land alienated from the crown in Western Australia averages 350 acres for each man, woman, and child in the colony.

Before concluding this necessarily brief sketch of the origin of the colony, it is due to the settlement to notice the rise and fall of a company, whose failure has been unjustly ascribed to the character of the country.

The *Western Australian Association* had its origin in the meeting of an institution held in London, 23rd August, 1835, to watch over the interests of the colony. After several meetings and annual reports, a regularly organized joint-stock company was formed in 1841, under the auspices of Mr. Edward Gibbon Wakefield (one of the directors of the corporation), whose object was to purchase a large quantity of land in the colony from the original grantees, Sir James Stirling and Colonel Latour [to whom 113,000 acres were assigned, 29th Sept., 1829], at a cheap rate, with a view of selling it at the rate of £101 for 100 rural acres and four town sections of a quarter of an acre each; the choice of the allotments and town sections to be determined by lot.

A township or city, termed *Australind*, was to be laid out at Leschenault bay, "to extend over a thousand acres, exclusive of a reserve for public objects, such as quays, streets, squares, markets, churches, and public gardens." About this period Captain (now Sir George) Grey returned to England, bringing accounts of the fine country he had discovered in the neighbourhood of Champion bay (see topography), and stating also the existence of a good harbour adjacent. Nearly at the same time, it was announced that the extensive grants to Colonel Latour were forfeited to and reserved by her Majesty's government. This news, united with the representations of Captain Grey, induced the Western Australian Company to change their plan, and attempt the settlement of the northern district. The change, however, exciting considerable alarm, and the directors having offered to refund the capital of all who desired it, a large part of the subscriptions were withdrawn, and confidence in the enterprise paralyzed. Colonel Latour's claims

eventually proved to be valid, but the evil caused by their supposed forfeiture was irrecoverable.

The chief commissioner of the company, Mr. Clifton, left England in 1841, with the first detachment of emigrants. On reaching Port Leschenault, on his way to the new district, he received such communications from the governor, and such information respecting the sup- posed Port Grey, and the country in its vicinity, as induced him to found the colony under his charge on the spot originally contemplated, in Leschenault inlet, instead of at Port Grey.*

On the arrival of H.M.S. *Beagle*, Captain Stokes, accompanied by Mr. Clifton, proceeded to examine the territory concerning which statements so contradictory had been made; they sought in vain for the harbour, and described the country as unfit for the settler, being deficient in the three most necessary articles, water, timber for building, and food for stock.† Subsequent examinations have proved that Captain Grey's statements were, nevertheless, correct, inasmuch as there is a harbour now called Port Grey, and a fertile and extensive tract of country in its vicinity (see topography). But to return, Mr. Clifton, considering himself fully justified in the step he had taken, proceeded, with the counsel and concurrence of the local government, to establish the settlement on the shores of Leschenault inlet; setting aside the somewhat Utopian arrangements and ground-plans sketched in London, for others more in unison with the physical features of the country. The first emigrants, however, had been obliged to follow the previous arrangements, which were found so harassing and unsatisfactory, as to induce several to abandon their allotments and leave the company's lands, and settle elsewhere.

Nevertheless, the energy and perseverance of Mr. Clifton appeared in a fair way of ultimately triumphing over all local obstacles; the substantial advantages of the site he had chosen were becoming evident, and promised solid, though not brilliant, success, when the Western Australian Company suspended operations, dismissed its officers, and practically abandoned the enterprise, since which period it has retained little more than a nominal existence.

The names of the governors and acting governors who have administered the affairs of Western Australia since its foundation, have been:—

Captain Sir J. Stirling, R.N. (governor)	1st June 1829
Captain Irwin, H.M. 63rd reg. (acting)	Sept. 1832
Captain Daniel, H.M. 21st reg. „	Sept. 1833
Captain Sir J. Sirling, returned from England	Aug. 1834
John Hutt, Esq. (governor)	2nd Jan. 1839
Lieut.-Col. Clarke, K.B. (governor)	Feb. 1846
	Died 6th Feb. 1847
Major Irwin (acting)	7th Feb. 1847
Captain Fitzgerald, R.N. (governor)	Sept. 1849

CHAPTER II.

PHYSICAL ASPECT—COAST LINE—ISLANDS—HARBOURS—RIVERS AND LAKES—GENERAL TOPOGRAPHY OF THE COUNTIES—GEOLOGY—MINERALOGY—SOIL—CLIMATE—WINDS AND TIDES.

Western Australia is not marked, like the provinces of New South Wales, and of Victoria, by lofty mountain ranges, nor, like that of South Australia, by deep gulfs or bays; or distinguished by any great river, such as the Murray. Sheltered from the tremendous roll of the Southern Pacific, and laved by the more placid waters of the Indian Ocean, the west coast, between Sharks' and Geographe bays, presents a comparatively regular and unvaried outline; comprising, nevertheless, many estuaries or inlets, some of considerable size and depth, but barred with sandbanks at their entrance, so as to prevent their being safe harbours for large ships.

The coast-line north of Geographe bay is bounded, for a distance of thirty to forty miles from the land, by a bank of coralline,

* See Mr. Clifton's Letter to Captain Stokes, published in the latter gentleman's *Discoveries in Australia*, vol. ii., p. 382. † Ibid.

or calcareous formation, such as is found on the coast of Sicily. The bank of soundings extends farthest off the north-west coast, as eighty-five miles north of Depuch island (De Witt's Land) a bottom of fine white sand was found at seventy-five fathoms. Between 19° 50′ and 20° 10′ S. lat., about forty miles from the islands fronting the coast, there are soundings of 200 fathoms. Off the south point of Sharks' bay, in 26° 42′ S. lat., soundings of grey sand were obtained in 137 fathoms, at thirty-seven miles distance from the land. In 32° S. lat., twenty miles off Rottnest or Garden island, the soundings are seventy fathoms.

The distinguishing feature of the colony is a somewhat elevated and occasionally steep and rocky range, termed the *Darling Hills*, which runs nearly parallel with the west coast, at a distance of about twenty miles from it, and extends from about 35° S. lat., near Point D'Entrecasteaux, along the meridian of 116°, for above 400 miles, with an average breadth of forty miles, and a height varying from 1,000 to 1,500 feet. There are collateral spurs, which, on approaching the 32nd degree of latitude, appear to form extensive parallel chains, and are probably connected with more elevated mountains in the unexplored northern and north-eastern parts of Australia.

Captain Grey says that he discovered two mountain ranges; one, named *Victoria range* (see general map), at the northern extremity of the Darling range, and about thirty miles to the eastward of it, lofty and altogether differing in character from the Darling, which at this point, where its direction is nearly north and south, is called *Moresby's flat-topped range;* and another, apparently thrown off in a westerly direction from the Darling range, about forty miles in length, from north to south, of a bare, sterile, and barren nature, and terminating seaward in Mounts Peron and Lesueur. This ridge is called, after one of the most intelligent gentlemen in the Colonial Department, London, *Gairdner's range.* (See map of Western Australia.) Another ridge, north and east of the preceding, is termed *Herschell's range;* and one farther south is called *Smith's range.*

The Darling range presents the appearance of a mighty forest of magnificent timber, broken only occasionally by a few inviting valleys.

The Darling hills separate the province into two distinct districts; the one, termed the plain of *Quartania,* situated between the Darling hills and the sea coast, stretching from south to north for about 300 miles, with a breadth of fifteen to twenty miles. This plain is well wooded towards the coast, is in some places low, of a coralline structure, and full of estuaries, lakes, rivers, and streamlets. In other places the limestone formation rises into eminences and hills, parallel to the coast-line, and nearly isolated from the surrounding country. To the northward, towards Champion bay, the country becomes more undulating, and presents some singular ridges.

The district to the eastward of the Darling range, "the country over the hills," may be said to commence at King George's Sound, on the south coast, and run north for 500 miles, over a varied territory, which in some parts has been compared to the county of Herefordshire, in England; in others, to the county Wicklow, in Ireland; and in the more northern parts, in the Toodyay district, to Switzerland. The extent of arable land in this division of the colony is very considerable; so lightly timbered as scarcely to offer any obstruction to the plough; and consists of a loamy soil, well watered, not subject to be materially affected either by heat or wet. The settled portion commences about the latitude of Perth, and extends north from 80 to 100 miles. Some settlers have, however, located themselves 100 miles farther, in a northerly direction.

Owing to the limited number of its settlers, and the serious difficulties with which they have had to contend, Western Australia has been less extensively explored than the sister colonies described in the previous pages, and the knowledge acquired of its physical features is, consequently, yet more fragmentary and imperfect; the difficulty, moreover, of framing a correct though brief general view of the topography of this extensive and really valuable province, is materially increased by the contradictory statements made by different explorers, for, as in the case of the Geraldine district, the same region has been pronounced by one party, of exceeding fertility and beauty; by another, sterile, and absolutely unfit for cultivation. After careful examination of every available source of information, I have succeeded in forming, as it were, a skeleton outline of the coast line and the country at the back, as far as it has been examined;

but the details cannot be filled in, while so much even of this portion remains imperfectly known.

The north-west coast line of Australia has been traced as far as Sharks' bay, in the general description of the island (see p. 382); and the inland features, so far as they were seen by Captain Grey, in 1838, have been also noted (p. 379).

Sharks' Bay (see map of the whole island), in 26° S. lat., is large, of easy access, and affords several safe anchorages, It was discovered by Dampier, on 6th August, 1699, and so named by him, on account of the large number of sharks seen there. A considerable portion of the land adjacent to this extensive inlet is yet unexplored; we continued unacquainted, even with the coast line, and it still seems to me probable (as I stated in my *History of the Colonies*, in 1834–5), that the outlet of a large river will ultimately be found in this neighbourhood.

Gascoigne River, nearly opposite *Bernier island* (see p. 382), and forming the south-western extremity of Sharks' bay, was partially examined by Captain Grey, in 1839: but with few men and a couple of whale-boats, it was impossible for him to determine the character of the country, the extent of the river, or the depth of an adjacent inlet. The manner in which he was preserved through the perils of shipwreck, famine, and thirst, while driven about this wild coast, was truly wonderful. Nothing, as the gallant explorer himself says, could have saved him and his party, but the ever active and present care of Divine Providence. It appears from Captain Grey's examination, that the country to the northward and southward of the Gascoigne is low, covered with mangrove flats, and abounding in sand-banks, presenting, in fact, all the features of the embouchure of a great river. Near the sea-coast is a sandy, scrubby ridge, termed *Lyell's range*, apparently thirty miles in length. The plains beyond were examined for fifteen miles in a north-east direction, and found to consist of salt, mud, and moist sand, devoid of fresh water, and seemingly illimitable, the eye being too much affected by the mirage, to perceive their actual limits.

The Dutch commodore, Vlaming, visited this part of the Australian coast in 1667, found a river, and went up it with three boats, four or five leagues, amongst rocks and shoals; saw much water inland, as if the country were drowned, but no men nor anything fit for food, and, as was the case with our English explorer, wherever they dug for water, the ground was salt. It is supposed this river may have been the Gascoigne. Vlaming came to another river near the preceding, ascended it for about a league, found it terminated in a round basin, and was entirely salt. The country was destitute of grass and trees. The point of entrance into the river was composed of a very red sand. In the bed of the Gascoigne a fine white sand was found. The northern mouth of the Gascoigne, where entered by Captain Grey, had twelve feet on its bar at low ebb tide; the bar once passed, there are three to three-and-a-half fathoms, in a land-locked creek, which is separated from the sea by a shifting bed of sand and mangrove swamps, termed *Babbage Island*, which forms the northern and southern mouth of the Gascoigne river.

The southern mouth of the Gascoigne (lat 24° 57′) is completely free from shoals, and has seven feet of water on the bar at low tide; there is also a channel in it containing never less than this depth of water for about four miles, after which it is only navigable for small boats during the dry season. Large trees (termed snags, by the Americans) are firmly planted in the bed of the river, which renders the navigation difficult, especially at high water. In one part of Captain Grey's *Journal* (vol. i. p. 384), he speaks, as before, of the "*northern* mouth of the Gascoigne having a very good passage with twelve feet of water at low ebb tide;" in another part (vol. ii. p. 120), he says, "the *northern* mouth is narrower and more *shoal* than the *southern*." The truth, however, is, as admitted by the frank and intelligent author, his examination was "hurried and imperfect," and the opinion above given must be received with caution. The vast masses of drift-wood, the large trees carried across the bay to Dorre island, the gentle slope of the country into the interior, and the immense bed of the portion of the stream seen, indicate the existence of a large river which drains probably a fine region. Plains of a rich reddish loam border the Gascoigne on each side, occasionally broken by low, gently rounded hills, composed of the same description of soil; fresh-water lagoons were found in different places, the country, even in the dry season, was covered with grass, and no termination was seen of the good land, except near the sea.

Immediately to the south of the southern mouth of the Gascoigne, a line of shoals commences at two to four miles from the coast, and runs with scarcely any intermission round the bay, so as to render the approach to this coast almost impracticable. A low spit about twelve miles south of the Gascoigne river, is termed *Point Greenough*, and between this point and the river there is a deep bay, the shores of which are low and thickly studded with mangroves, through which many salt-water creeks run up into the country. Below Point Greenhough, the shore trends south-and-by-east, preserving its low character, but thickly wooded with mangroves for eight miles, when a remarkable change takes place, the mangroves suddenly cease, and the low range of hills which extend southward along the coast and parallel to the shore, increases a little in height. Within about the distance of a mile, the mangroves recommence, the coast trends south-east for about five miles, then runs south-east-by-east, forming a bay about four miles deep, the bottom of which appears to be lined with mangroves. After passing this bay, the coast runs south-east-and-by-south, the mangroves appear to be less numerous, and the low wooded hills approach nearer to the sea, the low shore is fringed with trees down to the water's edge, forming little green knolls of foliage. Farther south, to the *Hamelin Bay* and *Freycinet Harbour*, in the bottom of Sharks' bay, we know nothing certain.

Peron's Peninsula, about 200 feet high, is a barren, sandy table-land, sloping away to the southward.

Dirk Hartog's Island, when seen by Captain Grey, looked exactly like a Scottish heath. There is good shelter for shipping, and adjacent there is a guano island, and a very rich mother-o'-pearl bank.

Steep Point, the western extremity of this portion of Australia, consists of lofty inaccessible limestone cliffs, hollowed into deep caverns by the action of the waves. The coast then trends to the south-east, is very uninviting, and consists of a high range of barren limestone hills, ascending gradually from steep cliffs, which form the coast-line. The outline of these hills is monotonous; they have a barren appearance, and are rent in places by deep rocky gullies, which run down to the sea.

Red Point, the western entrance of *Gantheaume bay*, is a bold circular headland, four miles in extent. To the northward of this promontory the country has a white sandy appearance; the coast-line consists of low ridges of sand-hills; but inland there are said to be tracts of good pastoral and arable soil, in blocks of six to ten thousand acres—much of a rich alluvial character.

Gantheaume Bay, where the monotony is broken by the appearance of detached hills, although protected at the south end by a reef, has as heavy a surf breaking on it as on any other part of the shore. An inlet here is described by Captain Grey as "one of the most romantic and picturesque estuaries he had yet seen;" its shores abounded with springs, and were bordered by native paths, whilst the trickling springs, flowering shrubs, drooping foliage of several large sorts of casuarina, the number of wild swans on its placid bosom, and the natives fishing in the distance, imparted to the whole scene a quiet and charm to which he had long been a stranger. The mouth of the inlet is protected from the ocean surf by a line of breakers and reefs. There are rich flats on each side of the estuary, which communicates with a deep valley, through which flows a stream called the *Murchison*, after the distinguished geologist of that name.

During an expedition in 1849 from Perth, the explorers found on turning to the south-west along the bed of that stream, that the right bank of the Murchison river had wide grassy flats, the stream forming large pools, some of them more than a mile in length; but with the exception of the flats on each side of the bank, the country is said to be poor and scrubby, destitute of trees, and the hills high and rocky, consisting of red sandstone, those to the west capped with limestone. It is in this neighbourhood that the enormous deposit of galena ore has been found in 1848–9. In some places the Murchison runs through almost perpendicular sandstone cliffs, 200 feet in height, broken at intervals by enormous fissures. It is not yet known whether the embouche of the estuary into which the river disembogues, is navigable from seaward; the estuary is about one-and-a-half miles long, by half-a-mile wide; the tide flows five miles up the stream, when it is obstructed by rapids, above which the river, so far as it has been traced, is a succession of long reaches of water, 100 yards wide, and extensive flats covered with reeds. The river continues from east-north-east, through a more level country, running in a deep channel 80 to 100 yards wide,

bordered by thickets of acacia and cypress. Mr. Burgess, who visited the Murchison in 1848, says, "We rode up the river about seventy miles from our camp, and when we turned back the river bed was nearly as large as when we made it, but the water was quite salt." He thinks it would make a very good cattle-station, as there is plenty of summer food along the river, and plenty of winter provender on an extensive limestone range of hills which lie to the northward. There are also a number of large springs along its banks; game abounds. The Murchison is supposed to take its rise in the interior salt marshes. The Murchison valley is backed by some lofty and fantastic-looking hills, giving promise of a fertile region. A total geological change seemed to take place in this neighbourhood; a rock, heretofore unobserved in the south-west portion of Australia, occupied the principal place; with this rock limestone was associated, the springs had a strong sulphureous smell, and the lofty broken character of the distant mountains, give a grand appearance to the scenery.

The country behind Gantheaume bay, proceeding in a south-by-east direction, consists at first of ravines and scrubs, next of elevated sandy downs; thickly clothed with banksia trees; then of open sandy downs; subsequently a rich limestone region occurs, with gently sloping hills and valleys, affording even in April fair feed for sheep and cattle, with springs of water at intervals of every few hundred yards, generally situated at the edge of large clumps of trees. This description of country appears to be continuous in a south-easterly direction; on a southerly course a gravelly treeless table-land was found, in places covered with beds of clay, on which rested ponds of water, occasionally interscected by thick scrub.

According to Captain Grey, a fine fertile country, abounding in grassy valleys, rich plains, picturesque limestone ranges, running streams, and estuaries, stretches between the *Murchison* and *Hutt* rivers. It was more thickly peopled than any district previously seen; the native paths were broad and well beaten; the wells, ten to twelve feet deep, were executed in a superior manner, and the dwellings also were of superior construction. This observant traveller says, (vol. 2, p. 14), "It seemed certain that we stood in the richest province of South West Australia, and one which so differs from the other portions of it in its geological characters, in the elevations of its mountains, which lie close to the sea coast, in the fertility of its soil, and the density of its native population, that we appeared to be moving upon another continent." This region is situated between the parallels of 27° 30′ and 29° 30′: its principal river, the *Hutt*, disembogues into a large estuary. A few miles above the estuary the river separates into two branches, both of which were found running in April, 1839. The other principal streams which drain this district are the *Buller* and the *Murchison*. The entrance of the latter was not found available in December, 1849, for a cargo boat. The valley of the Buller is divided into two equal portions by a granite ridge; the land on the left bank of the eastern branch has been found to be of "a very good grassy description, consisting of a range of granite hills, about ten miles north and south, two miles wide." Water, in pools, and abundance of grass, exists on the eastern branch; further east, high and sandy level plains commence, in an abrupt line of sandstone slopes and hills. The valley is estimated to contain 10,000 acres of good grassy land, and 20,000 of inferior feeding country; the good land much broken into patches by that which is of inferior quality. Timber is scarce.

The *Chapman River* runs in a sandy channel, with small shallow pools; the land on the bank of the stream is indifferent and sandy for about a mile, when it rises into sandstone and granite hills, covered with excellent grass. The land upon its northern branch is not generally good, although some fine patches are to be seen. Mr. Burgess thinks there are 30,000 acres of good feeding and well-watered land on the north branch of the Chapman, and 30,000 acres on the south branch, but not so well watered.

In January, 1840, Mr. G. F. Moore, in the colonial schooner *Champion*, endeavoured, but in vain, to find a navigable entrance at the point laid down by Captain Grey as the estuary of the Hutt river. The interior, where any of it could be seen, looked grassy; but the view taken was very limited and hurried. In December, 1849, Lieutenant Helpman, in the colonial schooner *Champion*, examined a boat harbour which he had previously discovered at the south end of the Hutt estuary, and found in the channel, between the reefs, twenty-two feet water; the breadth, from the reef at the entrance to the dry sand beach, which is

very low and shelving, is about 200 yards; and in the middle, for about a quarter of a mile, there is eleven to nine feet water. The entire reef is about three-quarters of a mile long, extending in a north-west direction, about one foot above water, thus keeping the boat harbour clear, which will be found exceedingly useful for coasters drawing seven or eight feet water, or for even much larger vessels in fine weather. Plenty of fresh water is found around by digging one foot deep; fish abound, and may be easily caught from the beach. The ore of the newly-discovered rich mineral district, termed the *Geraldine*, may be shipped from this harbour, to which a good road may be made at an expense of £100.

The *Bowes streamlet*, near the Hutt, contains about 100,000 acres of good sheep country: the bed of the stream being filled with broad-leaved reeds, indicates a supply of water in the dry season. The country around exhibits a metalliferous formation. In October, the small brooks were all running strong, and the grass was then green. The hills are of gneiss, with granite and trap rock; the latter clothed with excellent grass, of various kinds.

The country south of the *Hutt* river was examined during an expedition, in 1847, by Lieutenant Irby and two enterprising gentlemen, Messrs. Gregory, of the Western Australia surveying department, who, on 20th December, crossed the *Chapman* river two or three times, and found the country, at first, scrubby, but afterwards saw several fine patches to the eastward. On a course varying north and east the country was grassy; the soil of decomposed granite; patches of scrubby country occurred, then a good grassy district of about ten miles; clumps of York gum, sandal wood, jam and black wattle, were observed on the hills. Deep grassy valleys extended in a southern direction, and the country appeared to continue good, and well watered. In the north and west, the grassy region extended for at least ten or twelve miles, presenting to view about fifty or sixty thousand acres of sheep pasture, of a fine description.

At the stream called the *Buller*, near Champion bay, the country, for a distance of five-and-twenty miles, is bounded by a lofty chain of flat-topped mountains, with so regular an outline as to appear rather the work of nature than of art. Between this range and a ridge nearer to the coast is a large and fertile valley, partially drained, toward the sea, by another valley—in both rise gently swelling hills and picturesque peaks, wooded in the most romantic manner.

The next position of importance on the coast, and indeed the best anchorage, (excepting among the Abrolhos), between Sharks' bay and Gage roads, (at the entrance of Swan River), is termed—

Champion Bay, situated in 28° 47′ S. lat., and 1° 9′ 20″ W. of Swan River. The roadstead is sheltered from the south-west by *Point Moore;* but a heavy surf occasionally rolls on the beach, extending from the bottom of the bay to the northward, so as to prevent boats landing, unless a jetty, of ninety feet in extent, were run out into twelve feet water. A road has been formed from the Geraldine mines to the bay, where a government station, with a few soldiers, has been established, for the protection of those engaged in mining operations. Public attention is now directed to this neighbourhood; and some details respecting the surrounding country, so far as is known, are necessary.

The most remarkable inland features are the *Menai hills*, a group at the north end of Moresby's flat-topped range, *Mount Fairfax*, and the *Wizard Peak*, or *Hill*, which is an almost solitary pyramidal hill, of 715 feet elevation, distant eleven miles from Champion bay. It is composed of large blocks of ironstone, which have such a powerful effect on the needle, as to change its direction, in different places, ten degrees. A few small casuarinas and wattles are thinly scattered on its summit, and some stunted xanthoreas on the south-west side. Stokes says, that part of the range lying immediately north, was absolutely a mass of bare ironstone.

Mount Fairfax, 582 feet above the sea, is the southern and most elevated part of Moresby's flat-topped range. It rests on a reddish, sandy, sloping plain, occasionally scattered with fragments of quartz and ironstone, which apparently characterize the formation of Mount Fairfax, and the neighbouring heights.

The outline of *Moresby's flat-topped range*, in 28° 50′ S., presents a remarkable similarity to *Sea range*, near the Victoria river, on the north-west coast, lat. 15° 20′ S., and to *Cape Bedford*, on the north-east coast, lat. 15° 10′ S. The drawings of these ranges given by Captain Stokes (vol. ii., p. 142), present a striking resemblance to each other, in their contour as well as elevation. The view from the summit of Wizard peak is

very commanding: to the north-north-west and north-east lie extensive valleys, concerning whose capabilities very different opinions have been expressed. To Captain Stokes (who viewed them through his telescope), they all appeared of a similarly arid nature. For a few miles to the eastward, and a great many to the northward, the formation of the country is considered by this authority to be of the same flat, broken, and irregular character, including no greater elevations than the Wizard peak, while to seaward, the appearance of the country was that of an undulating plain, with patches of stunted woodland, widely scattered. Mr. Bynoe, an intelligent naturalist, who accompanied Captain Stokes, conceived a like impression of the comparatively sterile nature of the country: he says, it was only the surface soil which held vegetable matter; that near the Wizard peak, the holes dug by the natives to obtain the warran, or native yam, disclosed pure sand; and that near Moresby's range, the soil became freely mixed with ironstones and pebbles—the vegetation more stunted, consisting principally of prickly bush, mingled with coarse brown grass, on which few kangaroos or emus were seen.

On the other hand, the Honourable George Fletcher Moore, who was my fellow-student at Trinity college, in days of yore, and who there distinguished himself by high attainments, and whose quiet, observant character was not likely to give expression to a hastily-conceived or exaggerated opinion, thus speaks of the country near Champion bay:—"Judging by the eye, at that distance, the entire space, as far as we had an opportunity of seeing, after going a little way back from the coast, on the slope to the hills, upon the hills, among the hills, beyond the hills, and, in short, everywhere as far as the eye could discern, appeared a grassy country, thinly sprinkled with some low trees or shrubs, perhaps acacias. If this be the case, and there be water sufficient, of which there is no reason to doubt, this may certainly turn out to be the finest district for sheep pasture that this colony can possess."

Since the foregoing was written, I have received from several quarters details of explorations and examinations of the country to the northward and eastward of Champion bay, which fully substantiate these views, as well as those expressed by Captain Grey. Mr. Gregory, also, who ascended the Wizard Peak, in 1848, gives an idea of the country totally different from that expressed by Captain Stokes; he says, in his journal:—

"After an hour's ride over rich grassy hills, reached the foot of Wizard's peak; here we left our horses and ascended the hill; arrived at the summit, to our great surprise, instead of the scrubby and sterile country described by Captain Stokes, of the *Beagle*, beautifully grassy hills stretching from north-north-east met our view to the extent of about 20,000 acres; had it not been for certain bearings to Mount Fairfax and other hills, that we were on Wizard peak, I should have suspected its identity. Leaving Wizard peak and steering north along the western foot of the grassy range; the country to the east consists of grassy hills of limestone, rich in fossils of wood and shells, with an occasional granite hill producing coarse grass or short scrub."

The *Greenough River*, which flows into Champion bay, was examined, in 1848, by the Messrs. Gregory and Burges, and found, near the sea, bounded by white and red sandstone cliffs 200 feet in height, and generally covered with dense thickets of acacia growing on an otherwise barren and stony soil. One channel was found dry, with no appearance of water having passed over its sandy bed during the previous winter; as the river was traced upwards, in a *southerly* direction (see map), it was found to improve, and was joined by a small gully from the west coming through a grassy valley. The explorers, on altering their course to 210 degrees, found the country improve, the river running, with many large pools of water, some more than half-a-mile long, and 80 to 100 yards wide; the water from sandstone springs slightly brackish. It is estimated that there are 50,000 acres on the Greenough well grassed and watered.

The embouche of the Greenough river is a small estuary separated from the sea by a low bank of sand, thirty-five feet wide and five feet high, over which the sea, during gales, appears to enter. The banks of the Greenough are, in some places, seventy feet high, composed of limestone.

Mr. Roe, the surveyor-general of Western Australia, found, in June, 1847, to the north-east of Champion bay, a tract of about 150 miles of good arable land, one-third of which he considered excellent for every purpose, either agricultural or pastoral. He states, however, that he did not find quite so much good country as Captain Grey's book would have led him to suppose.

Proceeding southward, we arrive at *Port Grey*, which is five miles to the southward of Point Moore. The shore between is rocky, with outlying reefs. There is

an extensive reef running from Point Moore, and one to the north from Point Grey, and a centre one, leaving a clear opening on each side. The port is exposed to southerly winds, but there is "a very snug little harbour formed by the reef, extending from the land in the depth of the bay." There are two and-a-half fathoms smooth water close to the reef, and the point of this natural jetty shuts in with Point Grey, bearing south-by-east, "so that no wind could hurt." There is fresh water close to the harbour, which seems to be adapted for small coasters.

Before proceeding further with the coast line, it is advisable to examine *Houtman's Abrolhos*, distant thirty-five miles from the mainland, in 32° 42′ 50″* S. lat., and 1° 57′ 50″ W. of Swan River. They form three separate groups of coralline islands and reefs, which extend in a north-north-west direction forty-eight miles, diminishing in breadth towards the north. They are termed the *Northern*, *Easter*, and *Pelsart* group, and are separated by channels four to ten miles wide.

Easter group (the central) contains a large and secure haven, termed *Good Friday harbour*, having fifteen to seventeen fathoms, fine muddy, sandy bottom, between the coral patches, which demand the utmost attention from the navigator in entering the harbour.

Rat Island, the centre of the group, has an elevation of about thirteen feet, and has low overhanging cream-coloured limestone cliffs. The soil is mixed with guano, and filled with burrows of the sooty petrel or mutton bird. The island is infested with rats, and there are numbers of a pretty lizard, whose tail is covered with spines.

The Abrolhos form the upper surface of the great coral-bank, which extends from the mainland, and shelves off at the outer edge of the south part of the group, almost precipitously to no bottom, where soundings are not found with 250 fathoms line. The average depth surrounding the islands is twenty to thirty fathoms. With the exception of the Bermudas, these coral islands, so far as we know, are the farthest distant coral formation from the equator. The reef on which Rat island rests extends off 400 yards on the inner side, and has twelve fathoms just off it on a grey sandy mud. The greater portion is composed of a variety of corals, intermixed and forming a consolidated mass with "brain-stones" scattered over it. The reef is nearly dry at low water; but a portion does not rise so high, and projects so as to form a narrow shelf, from the edge of which a wall descends almost perpendicular to the depth of fifty-four feet. The coral on the upper twenty feet is formed in the shape of huge fans, spreading out from stout stems, overlapping each other in clusters, and having angular cavities between. The lower portion of the wall is of the common branch kind.

The *Wallabi Islands* form part of the Abrolhos group, and have a good haven, termed *Recruit harbour*, with eleven to twelve fathoms, perfectly sheltered on all sides. East Wallabi island has an elevation at the north-east extremity of fifty feet, and measures upwards of a mile each way. West Wallabi island is two miles and-a-half long, by one mile broad; in the centre is a low flat, with hills rising all round except on the south side. *Flaghill*, the highest, is formed of sand and comminated shells, while the flat which stretches to the south-west from its foot, is of limestone formation, on which there is a cavern fifteen feet deep, with a sloping entrance and a stalactite roof. Some sand hills, thirty feet high, and covered with a dense scrub, are filled with the burrows of the mutton bird. The north end of the island is a level stony flat, with patches of brushwood, among which Captain Stokes found such an abundance of the marsupial animal, termed the Wallabi, that in four hours, seventy-six, weighing about seven pounds each, were killed with three guns. It is strange how these animals reached the islets from the main. The snapper fish were numerous off the island, and so voracious that they allowed themselves to be taken with a small piece of paper for a bait.

Gun Island, in 28° 53′ 10″ S. lat., 1° 53′ 35″ west of Swan river, forms the north-west extreme of the Pelsart group, and is the largest of the islets (a quarter-of-a-mile mile long). The group is encircled by a reef; on which doubtless the Dutch ship *Zeewyk* was wrecked in 1727. The island was so named by Captain Stokes, in consequence of finding on it, 24th April, 1840, a brass four-pounder of singular construction, which is now deposited in the United Service Museum, Scotland-yard, London. The gilding on the ornamental brass-work is in a remarkable state of preservation. Two Dutch doits were found, bearing date 1707

* This is the position of the observation spot of Captain Stokes on *Rat Island*

and 1720; also a number of pipes and glass bottles; the latter of a stout Dutch build, some capable of holding five or six gallons; they were placed in rows, half buried in the sand, as if for the purpose of collecting water, and were covered with a white substance, which had eaten away the glaze.

Resuming now an examination of the coast to the south of Champion bay, it appears, for at least thirty miles, as seen from the deck of H.M.S. *Beagle*, to consist of high sand hills, partly covered with vegetation; immediately in the rear is a range rather higher and of a less barren appearance; behind these again, at a distance of eight or nine miles, there arises a series of singular table-topped broken ridges.

The *Irwin River* falls into the sea midway between Champion bay and the Arrowsmith; it rises in the interior to the eastward, and has in some places a bed eighty yards wide, with limestone and clay banks, thirty feet high; but in the dry season water is only to be found in pools. The valley of the Irwin is said to extend thirty miles north-north-west and south-south-east, and is about eight miles wide. On an east-north-east course from Champion bay, there are extensive flats of good light soil, well grassed, and some two miles wide; a beautiful country, full of warren-holes, and lightly timbered; several good pools, "one 200 yards by 25, and no bottom to be found by diving." A fine wide grassy flat, with small trees, continues to 29° 9′ S. lat. Advancing thence in a north-east course, the country much improves; banks of clay and red sandstone occur; but on approaching the *Coal Valley* in 29° 57′ 42″ S. lat. (200 miles north of Perth) there are no flats but steep banks to the river bed, with plenty of good water by digging a few inches, and abundance of grass. The river bed twenty-five yards wide, running through sandstones and shales. The coal seam seen here was about six feet thick, and ran entirely across the bed of the river, and under the bank on both sides. The Irwin divides into two branches, where the sandstone ceases, and the granite formation commences; the largest stream flows from the eastward.

Mr. Macgill, an officer of her Majesty's 96th (who was afterwards unfortunately lost), made, in company with others, in 1847, a journey from Lefroy's station, on the *Moore* or *Garban river*, to Port Grey; he found the country (probably he kept near the coast), for the greater part of the way, wretched and unproductive; the party were two days without water; but the Irwin valley he describes as a "terrestial paradise," in breadth from one to six miles, and extending, at all events, from twenty-five miles inland down to the coast.

The *Arrowsmith River*, or rather brook, has its embouche in the sea, to the north of Gairdner's range, and its rise to the north-east, in the Herschel range. The pasture-lands on the Irwin join those on the Arrowsmith; the country is said to be better adapted for cattle than for sheep, as parts of it are rather low; for agriculture it would be useful, as the soil is rich, and there is scarcely a tree to each hundred acres. There are about 10,000 acres of fine rich pasture land along the banks of the Arrowsmith, reaching within two miles of the sea, which would make a superior summer run for a large herd of cattle. Ten thousand sheep could be kept between the Eastern Irwin and the Arrowsmith, but the occupiers would probably have to dig for water. Whether the river and country is identical with that named by Captain Grey, is uncertain.

The country between the Arrowsmith and *Moore river*, crossing the streamlets of Hill and Smith, behind the ranges, consist of extensive plains, which, at least, during the rainy season, are well grassed.

The *Hill* stream flows from the south end of Gairdner's range.

The *Garban* is formed by the junction of the Moore and Norcott rivers, about fifty miles north of Perth. From the Garban to Perth, there is a chain of fresh-water lakes, at intervals of five or six miles apart.

The coast line presents no feature of note; harbours for cargo boats probably exist at *Island Point*, *Jurien Bay*, *Lancelin Island*, and behind the reefs at and near *Breton Bay*. The appearance of the shore is barren and forbidding, but the wind seldom blows direct on the land; vessels can therefore run north or south, according to circumstances.

Approaching the Swan-river estuary, we reach *Rottnest* (rats' nest) *Island*, distant twelve miles from the port of Fremantle; it is ten miles long by seven wide, heavily timbered, principally by the cypress, and bounded for nearly its entire circumference by limestone rocks, so as to present few landing-places for boats. This island is the prison where the aborigines of Western Australia were transported, for offences com-

mitted in the colony. From a gently rising ground near the superintendent's house, the view is enclosed on every side by a chain of hills which slope gradually down into the plain, occupied by a succession of lakes, the largest two miles in circumference, and one yielding pure salt in abundance. The aborigines, about twenty in number, under the direction of their superintendent, Mr. Vincent, and with the aid of four soldiers, have built an excellent dwelling-house, store (70 feet long), cells for prisoners, workshop, stable, &c.—all of stone; made a road, ploughed, fenced, and cultivated a considerable quantity of land, and done much useful work. This establishment is now broken up, and the island leased to Mr. Thompson. The convict aborigines are employed on the roads. The salt lake is a short distance from the house of the superintendent; it is about three-fourths of a mile in circumference, and is nearly covered with beautiful crystals of dazzling white salt, of which many tons are collected in a month. The water of this lake might, in American language, be termed a "concentrated essence of sublimated salt;" it is so intensely acrid, as to blister the tongue when tasted. Mr. Deputy Assistant-commissary Webb, who explored the island, was pleased with the scenery; the soil is of a light sandy loam; in some places there is a rich dark brown mould prized for gardens.

The *Swan River*, which originally gave its name to this colony, takes its rise about 80 miles from the coast, flows north for 100 miles under the name of the *Avon*, then joining the *Toodyay* turns west, passes through the hills for fifty miles, and disembogues into the *Perth water*, an estuary about two miles long by one broad, which communicates with the beautiful lake termed Melville water, seven miles long by four broad. The Swan flows all the year round, and sometimes renders the waters fresh in Gage roads during winter; together with the Perth water, it is navigable for boats or flat-bottomed craft, as far as the tide flows, viz., about forty miles.

The *Canning*, which flows from the south-east into Perth water, has a boat navigation for fifteen miles. The *Helena* falls into the Swan below Guildford.

The Swan river is subject, like other Australian rivers, to occasional, sudden, and tremendous floods, which inundate the corn lands in the vicinity. The early settlers, unaware of this fact, selected a low-lying site for their town; but the first winter, fortunately, gave them a warning to choose a more elevated and safer position.

Melville water, on which Perth, the capital of Western Australia, is situated, opens into Freshwater bay, and the latter into Rocky bay, from which the estuary continues in smaller reaches until it opens into the sea at Gage roads, where the town of Fremantle is situated. The portion of the bar from Fremantle to Rocky bay, is full of shallows, on which there are only nine to ten feet water; but the estuaries of Rocky and Freshwater bays, and of Melville, have sufficient depth of water for the largest ships, and would form a fine harbour, if accessible from the sea. In my *Colonial Library*, vol. iii. p. 328, published in 1836, I urged the cutting of a canal, so as to admit large vessels. The bar at Fremantle, which extends three-fourths of a mile, not long since was blown up, so as to admit craft of eight feet draught to reach Perth; and it is now proposed to cut a ship canal from Rocky bay to the sea, through an isthmus of soft calcareous sandstone 480 yards in breadth, with an average height of fifteen feet. If this be done, and the mouth kept free from sand, Western Australia will possess a most complete land-locked harbour.

The cliffs of the coast near Swan river appear covered with thousands of roots, twisted together in a reticulated manner. The same formation is observable at Bald Head, King George's Sound. Their resemblance to the stumps of a dead shrubbery is so exact, that, before touching them, it is difficult to say which is the wood and which the calcareous matter. Mr. Darwin supposes that this singular appearance has been caused by the wind heaping up calcareous sand, together with branches, roots of trees, and land shells; the whole being subsequently consolidated; and when the fibrous portion decayed, lime, washed into the cylindrical cavities by the action of rain-water, preserved the form of the wood. The decaying influence of the weather is now washing away the sandstone and softer portions of the rock, leaving the vegetative forms in their primitive state.

Gage Roads, at the entrance of Swan river, are formed by Garden, Rottnest, Peel's, and Carnac islands; and the anchorage is protected from the vast body of water which rolls in from the north-west by a bank, which ex-

tends out to the north-east, between Rottnest island and the main. The anchorage is in seven or eight fathoms, on sandy mud, about a mile from the gaol at Fremantle,* bearing east by north. A quarter of a mile nearer the shore, the bottom shoals rapidly to four and three fathoms, on rocky ground slightly coated with sand. A ship rightly found—especially with Honiball's patent moveable fluke anchors—would not drag up so steep a bank; and Captain Stokes thinks that the cause of some ships being driven on shore has been owing to not selecting a proper berth, and getting too near the land, on a rocky ground; so that, when a breeze sprung up, there was no time to let go another anchor with effect.

Owen's Anchorage, the usual resort from the 1st of May to the 1st of September, is perfectly secure, and readily accessible from Gage roads.

Cockburn Sound, in 32° 10′ S. lat., formed between Garden island and the main land, seven miles from Fremantle, is a safe and extensive anchorage. It would contain 1,000 ships, out of mortar range either from the sea or land side, and in the hands of an enemy would be exceedingly injurious to our maritime interests, especially in the Indian Ocean. H.M.S. *Beagle* rode out two gales, of forty-eight hours' duration, here, on the 31st of March and the 11th of June. The gales commenced at north by west, and, after lasting forty-eight hours, gradually blew themselves out at west-south-west. At the anchorage there was not more sea than a boat might have endured.

Rockingham Harbour is said to be a good haven, requiring only a small breakwater, for shelter against the north-by-west winds, which are of rare occurrence. The deep water runs within a few yards of the shore, and a jetty would enable large ships to discharge their cargoes.

Warnborough Sound, three miles from north to south, and two miles and-a-half from east to west, is formed by a chain of reefs; the entrance-bar has five or six fathoms water on it.

Safety Bay, an inlet of Warnborough Sound, is about thirty miles south of Fremantle. The mouth of the inlet has a tendency to fill up with sand, which a small expense in piling would prevent. If this were done, a light-house erected, and the entrance buoyed, an Indiaman, it is said, might discharge her cargo by means of a plank to the shore.

Peel Harbour, forty-five miles south of Fremantle, has a narrow entrance. The estuary is in length about fifteen miles, by two to four miles in breadth, and eight feet deep. Inside there appears to be sufficient depth of water and space to hold many vessels.

The *Murray River*, which is navigable for sixteen miles by boats, disembogues at the centre of Peel inlet; and the *Serpentine*, *Currie*, and *Dandalup* streams flow into the broader part of the estuary. The Dandalup joins the Murray. The *Harvey* flows into the head of the inlet.

Leschenault or *Koombana Bay*, in Wellington county, eighty miles south of Swan river, ninety-eight miles from Perth by land, and 180 miles from King George's Sound, has the mouth of its inlet situated in lat. 33° 19′ 10″ S., long. 115° 40′ 15″ E. The bay affords shelter for large ships in four and-a-half to five fathoms, excepting from north by east to west, and by north or west-north-west winds, or for smaller vessels lying further in, round to north-west; but as the bottom is clear of rocks, and there is good holding-ground, vessels have been uninjured during the heaviest gales. *Mount William*, bearing N. 40° 6′ E., from near the entrance of the bay, distant thirty-three miles, and with an elevation of 1,725 feet, is the best land-mark. *Mount Leonard*, another elevation of the Darling range, bears S. 81° 44′ E.; distant thirteen miles; elevation, 1,270 feet.† The Leschenault inlet, or estuary, at the south-west of Koombana bay, is separated from the ocean by a narrow limestone ridge, covered with timber and vegetation, and has a well-protected entrance. The estuary is about fourteen miles long, by upwards of a mile broad; in some parts, three to six fathoms deep; affording in all places water communication, as it is full to the shore edge. There is a sand-bar, easily removeable, dividing the estuary from the bay; boats drawing three to four feet water can pass it at all times. Rise of tide inconsiderable.

The *Preston* and *Collie Rivers* have their embouche on the east side of the inlet; and the *Brunswick* falls into the Collie, a little above its embouchure. These rivers are running streams all the year round, skirted

* The longitude of Scott's jetty at the Swan River is considered to be 115° 47′ E. of Greenwich.

† *Stokes' Voyage in H.M.S. Beagle.* Vol.ii., p.396. Roe's Chart gives the height of *Mount William* 3,600 ft.

by rich pastures, and remarkable for the beauty of the scenery around.

At Leschenault, the Darling range approaches within fourteen miles of the sea; its sharply-pencilled outline broken only by Mount Leonard and the gorge through which the Harvey river flows.

Australind is situated on the easternmost border of the Leschenault estuary. It is, beyond all comparison, the best planned town in the colony; and Mr. M. Waller Clifton deserves great credit for the ability and taste which he has manifested. A substantial bridge has been constructed over the Brunswick river, in the township: it is 160 feet long, by 10 feet wide; the span of the four chief arches is 27 feet; it is supported on five piers, of which three are in 12 to 16 feet water.

Bunburry, at the southernmost part of the bay, is beautifully situated on a small high peninsula, lined on the south by basaltic pillars. The town is well laid out; all the streets cross each other at right angles; and the neighbouring country is very pretty. The harbour is secure for small craft; but large vessels lie in the roadstead, to take in long timber. On the sea shore, near Bunburry, there is a formation of pure basaltic rocks, resembling, in miniature, the celebrated Giant's Causeway in Ireland. The columns, as seen in the chasms caused by the action of the sea, are, in some places, six feet high, and beautifully shaped. The district between Bunburry and Geographe bay (Henty's Plains) is one of the richest in the province.

Geographe Bay forms a complete curve. Vasse inlet, in the south-east portion of the bay, affords shelter for small craft. There is good anchorage, protected from north-west and south-west winds, on the north-east side of *Cape Naturaliste*, (which is in 33° 31′ 45″ S., 0° 47′ 30″ W. of Swan river), the westernmost point of the bay. The township in Geographe bay is named Busselton, situated on the Vasse river, 130 miles south of Perth. The most conspicuous feature is a neat stone-built church, recently erected, of which a drawing was given in the *Illustrated London News* of 21st February, 1846. The nave is 40 by 20 feet; the chancel, 14 by 12 feet; the walls 16 to the line of roof; the roof is constructed of native mahogany, with principals, purlines, &c. Thus at a place, of which the name and position are almost unknown in the mother country, Englishmen have erected this stately fane, almost in the heart of a wilderness.

The *Vasse River* is said to "flow through a district rich in herbage, resembling clover, and enamelled with daisies, buttercups, marigolds, and other beautiful field flowers."*

The north extreme of *Cape Naturaliste* is formed of majestic cliffs of limestone, 200 feet high, and perforated with two ranges of caverns. The outer, or great cavern, is about 50 feet wide, 45 high, and 100 feet deep. Some of the stalactites measure 15 feet. The sides and roof present an extraordinary assemblage of colours, owing to the variety of liverwort and fungi with which they are covered. From Cape Naturaliste to *Cape Hamelin* the coast lies nearly due south, marked only by the *Margaret* river, which has its mouth almost midway between the two capes. The most striking sea-coast feature is a belt of snow-white sand, of some hundred yards in width.

Cape Leeuwin, or *Landt Van de Leeuwin*, land of lions, so called by its discoverer, in 1622, is situated at the south-west extremity of Australia, lat. 34° 21′ S., long. 115° 6′ E.: it is tolerably elevated, of a smooth but sterile aspect, visible about thirty miles in fine weather, and defended, between south-west and south-east, by rocky islets or detached breakers, to the extent of five or six miles. It appears like an island, lying close to the main, with lower land on its north side. Soundings do not extend far off shore. Flinders found eighty-five fathoms, at nine to ten leagues south by west, and forty to sixty fathoms, at six leagues to the south of the Cape. South-west gales, with a heavy sea, are experienced off this cape. H.M.S. *Zebra* was compelled to throw her guns overboard. I was myself, on one occasion, in a constant gale for nearly three weeks, running from north to south, without being able to make any westing to double the Leeuwin. There appears to be a northerly current setting round the Cape from the westward; but an easterly current generally sets along the southern shores, towards Bass' straits. A settlement was formed to the south-east of the Leeuwin, at a small harbour towards *Augusta*. It was abandoned, on account of the alleged insecurity of the haven. The anchorage is spacious, sheltered from the usual winter winds from the north and north-west, but open to those which blow from south and south-east.

* *Western Australia*, by T. J. Buckton, Esq.: p. 39. London: 1840.

The *Chapman* river, after its junction with the *Blackwood* river, flows into Augusta bay or inlet, under the designation of M'Leod creek. It is navigable for boats in a northerly, and then in a westerly direction, for twenty-five miles.

The *Blackwood* river has been traced fifty miles previous to its junction with the Chapman; its banks are stated to be, in many places, covered with a dense forest of enormous trees, and some of the finest land seen by Sir J. Stirling was observed in its vicinity. The country was partially examined, a few years ago, by Mr. J. C. Russell. At first, the timber was of minor growth, and as thick as usual: after advancing four miles, the country improved; the "face of nature became more and more pleasing; the soil a rich red loam." On a southerly course the country deteriorated; but, on bearing west, the explorer "came upon a brook, surrounded with magnificent gum trees, the scenery very beautiful, with banks sloping down to the water." Much of the country seen was "exceedingly fertile, but greatly encumbered with timber of stupendous size." There were some grassy plains, and the region is well watered.

Proceeding eastward from Cape Leeuwin the coast trends to the north-east, and forms an open roadstead termed *Flinders' Bay*, which curves south forty-three, east thirty-seven miles, along a low, sandy, uninviting shore to *Point D'Entrecasteaux*, a remarkable cape in 34° 52′ S. lat., 116° 1′ E. long, visible thirty miles from the deck of a ship. The next prominent point, *Cape Chatham*, is a steep rocky island, lying a mile from a cliffy projection on the main, lat. 35° 2½′ S., long. 116° 29′ E.

Point Nuyts, seven miles east by south from Cape Chatham, is a cliffy head, projecting three miles beyond the line of coast.

It is known that *Nornalup* and the *Deep River District* possess a very fine country; timber of the most stupendous size, and of the best quality, is found in this neighbourhood. A seven ton vessel was built of one piece of thirty feet, cut off the butt of a tree of 150 feet high before branching.

This region is not sufficiently known to enable me to give any description of it; it appears, however, very probable, from what I saw of the coast-line, that a good country, with certainly a fine climate, will be found in the interior; the shore abounds in inlets capable of being made valuable. *Irwin Inlet*, *William's Bay*, and *Torbay*, possibly possess good havens. *Mariet Lake*, near Ratcliffe bay, is a large sheet of water. The whole of this coast and country ought to be carefully surveyed and explored.

King George's Sound, the best harbour in Western Australia, is formed on the south side by *Bald Head*, and defended at its entrance by *Breaksea*, *Michaelmas*, and other islands, which protect the sound from easterly winds. There are two havens called *Princess Royal* and *Oyster harbours*, the former adapted for large ships, the latter for vessels not drawing more than eleven feet of water, which may be secured within 100 yards of the shore. For a ship only wanting water and fuel there is a sandy bay in the south-west corner of the sound, where two or three streams of excellent water run into the sea over the land.

Bald Head, which forms the south-west portion of the sound, is a barren rock of moderate elevation, about two miles and-a-half in length; it is connected with the main by a low piece of land, in the centre of which stands a small peak; this gives the head from the offing to the southward the appearance of an island. The conspicuous headland, called *Peaked Hill*, with a peculiar profile outline, is about five miles to the south-west of Bald Head, whose south end is in 34° 55′ S. lat., 118° 29′ E. long.

From the anchorage of *Princess Royal harbour*, situated at the back or west part of King George's sound, *Mount Clarence* bears north-north-east, and the south end of *Michaelmas Island* just open off *Point Possession*. Stokes says that the entrance to this great basin is by a narrow channel in the north-east corner; the chief impediment being a long spit extending off the inner west entrance; it was worked through by H.M.S. *Beagle* both ways; inside there is water sufficient for a line-of-battle ship, but only for a limited space, a short distance within the entrance towards the north-west corner of the harbour, where a straggling village points out the township of *Albany*. Mount Clarence and Melville rear their bare and granitic heads on either side, and huge fantastically-shaped boulders are strewn over their slopes.

The *Kalgan*, or *French River*, which disembogues into *Oyster harbour*, flows north from the *Stirling range*, is of considerable length, and fed by many tributaries. Excursions were made up the stream in 1831 by Dr. Collie and Lieutenant Dale, who for the first twenty miles of their route found dense forests of "mahogany," white gum

trees, casuarinas, banksias, wattles, (always indicating in Western Australia a good soil,) and other shrubs; ascending the stream the country became more open, and numerous ponds of brackish water were found.

About thirty-five miles north-west from King George's Sound, there is a fine country, resembling in its park-like features the neighbourhood of Melbourne, Port Phillip. There is an abundance of kangaroos, which indicates the pastoral character of the neighbourhood.

The *Hay river*, at two miles above Ungerup, is a small tortuous rivulet, with rich grassy banks, overhung by fine shady trees. The valley is narrow, sloping gently upon either side, and its soil is a fertile mould. Lady Spencer (whose husband was, for some time, Government Resident at King George's Sound), has some fine farms in this region. The crops of grain produced here are equal in quantity and quality to those of the most favoured districts in Van Diemen's island.

The district of King George's Sound is not subject to droughts, the harbour is almost unrivalled, and the adjacent seas, bays, and inlets abound with whales and excellent fish of various kinds.

Albany, which is still a mere village, is distant from Perth by land 300 miles, and by sea 450 miles; from Adelaide, South Australia, 1,400 miles; from Melbourne, Victoria, 1,800 miles; from Van Diemen's island, 1,850; and from Sydney, New South Wales, 2,700 miles.

The coast trends to the north-east from King George's Sound, and presents several bays and inlets; the principal, *Doubtful Island Bay*, is formed on the south side by *Point Hood* and the Doubtful islands; it is about six leagues across to the north shore, and about ten miles deep, affording shelter in its south-west part from all winds that do not blow hard between north-north-east and east. The north and west shores have not been closely examined; the coal seam, which extends in a southerly direction from the Irwin river, Champion bay, is supposed to be continued to this bay, as coal is found cropping out near the water's edge.

From Doubtful Island Bay the coast becomes low and sandy; trending in an easterly direction to the maritime portion of the province of South Australia. Mr. Eyre, during his adventurous and disastrous journey from the head of the Great Australian Bight to King George's Sound, found the country improve as he proceeded through the territories of Western Australia; tracts of better soil, and water-courses appearing to have an outlet to the ocean, rendered the country one of great interest, but the reduced and worn-out condition of himself and his horses, prevented his examining satisfactorily the character of the region he was traversing; he was therefore unable to determine whether the rivers (which appeared to have but a short course) had or had not their embouchure open to the sea.

Counties.—Having completed so far as is practicable an examination of the coast-line of Western Australia, its havens, inlets, and rivers, I proceed to shew the leading features of the counties into which it is divided, whose names, position, and relative area are indicated on the map.

From the smallness of the population, Western Australia has been, as I have before stated, far less extensively surveyed and explored than the sister colonies; it is, therefore, not possible to give a detailed description of the counties which it comprises, the larger portion of which are still unsettled.

Perth County, which contains *Perth*, the capital of the province, and *Fremantle*, the principal sea-port, may be considered as exemplifying the general character of the sea-coast, counties of Melbourne, Twiss, Murray, and Wellington. The Darling range rises abruptly from the plain of Quartania, about twenty miles inland, and consists of rugged round-topped hills of rock and gravel, with valleys of a rather better quality, occasionally affording favourable spots for culture. The whole is extensively covered by an eucalyptus forest of good timber, adapted either for the construction of ships and other buildings, or for domestic purposes. The Swan and other streams by which Perth county is irrigated, have been before mentioned, beside which there are numerous fresh-water lakes and swamps, the soil on whose banks is of great richness. Several of these having been drained and cultivated, produce luxuriant crops of fruits and vegetables, maize, &c.

Generally speaking, however, the aspect of this county is discouraging to the farmer. On arriving the prospect from the sea naturally gives rise to the exclamation—"Sand! sand! is there nothing but sand?" Little evidence of active life or prosperous industry greets the anxious eye of the immigrant, save in the towns of Fremantle and Perth, and the craft on the river. For twelve miles inland he does not see a farm.

Looking back from the top of Greenmount (the first hill of the range on the road to York) the eye wanders over an apparently unbroken forest plain, the great height of the trees effectually concealing all signs of farms or houses. The first view of Perth is however singularly pleasing. Situated about sixteen miles from the sea-coast, on the bank of the pretty sheet of water (formed by the Swan river) which bears its name; with the wooded shores opposite; the forest plain stretches away to the east; and the "range" rises in the distance; while the air, although so clear as to render the very stems on the trees distinctly perceptible, has yet all the charm of the soft haze, the many tinted lights and shades of a semi-tropical climate.

Gazing on this tranquil panorama from the top of Mount Elise, the English immigrant views with surprise in the gardens lying between the cliff and the estuary, the banana, peach, nectarine, apple, and pear, the lemon, orange, guava, loquat, and pomegranate, the almond, fig, and mulberry, while the melon and its fellows creep among their stems; but yet more pleasing is the effect of the endless interlacing of trellised vines beneath which the people are pursuing their avocations, and the successive terraces of vines and olives, rising almost to his feet; yet the question, Where are the farms? still remains unanswered.

A resident of several years' standing assures me that men frequently visit the colony, who having seen nothing beyond this, leave it with a very false impression, forgetting how unfair it is to judge by one limited tract, of the whole of so extensive a territory as Western Australia. In this county the farms are almost wholly confined to the banks of the rivers and lakes.

The position of Perth is well chosen, not only on account of its beauty, but for the more solid advantages which it possesses. The sandy soil, united to an unlimited supply of good water, procured at an average depth of fifteen feet, a perfect drainage in each direction, exposure to the healthful sea-breeze sweeping up the succession of picturesque estuaries, with a frontage and rear of garden-grounds, offer great promise of salubrity, while an abundance of brick-clay, lime, fire-wood, and timber of good quality have afforded the materials for a substantial style of building. Nor have these facilities been unavailed of by the settlers. Up to the year 1838, we learn from the journal of the Agricultural and Horticultural Society of Western Australia that the value of the improvements in Perth were estimated at £50,000, since which time the increase has been considerable. The building allotments have likewise materially augmented in value; fifteen years ago they were often bought and sold for a bottle of grog, now many are worth from £500 to £1,000; it must, however, be remembered that *then* high and tough gum trees covered the site of the city, and from the thickness of the "bush" it was dangerous to move about even for a short distance;—*now* there is a regular town, excellent houses of brick and stone, with large verandahs and neat gardens around; a store which cost £3,000—temples of worship for different denominations of Christians, a Government-house, Court-house, Western Australian bank, barracks, gaol, club-house, hospital, magazine, public offices, hotels, inns, mills, fields, gardens, good roads, farms and homesteads in various directions.

The military barracks at Perth occupy a pretty situation, about 400 yards from the river Swan (here nearly a mile wide), and at the head of the government square, which slopes gently towards the water. From the barracks there is an uninterrupted view of Melville water for a distance of six miles, and the beauty of the scenery is much enhanced by the many strips of land which run out from the shore, on either side. On the left bank of the river, separating Perth from Melville water, is a long tongue of land, with a windmill, and on the opposite shore of the narrow passage, Mount Elise raises its rugged and precipitous sides, which are studded here and there with white-walled cottages, peeping out from the foliage of the casuarina and banksia.*

Fremantle, the sea-port of Perth, distant about fourteen miles by water, and eleven by land, lies immediately behind the little promontory of "Arthur's Head." It is built entirely of white limestone, and the dazzling glare of the walls and houses is, in summer time, rather trying to visitors. It contains a very pretty church, a Wesleyan meeting-house, government store-houses, two good hotels, and some commodious dwellings. During the winter season, bay whaling is actively carried on; and one of

* From interesting sketches entitled *Our Western Australian Home*, by George J. Webb, Esq., D.A.C.G., published in an admirable miscellany termed the *Swan River News*.

the most spirited undertakings in the colony is the tunnel, made through Arthur's Head, from the principal street in Fremantle to the whaling jetty. The inland face of the cliff, at the mouth of this tunnel, is cut and finished like a fortification, and being surmounted by the stone gaol and court-house, has a striking effect. The whaling company's storehouses, &c., are partly cut out of the rock, and their ranges of furnaces and try-pots, together with the long sharp boats, suspended over the sea, ready for instant action, with oars, harpoons, baskets of coiled line, lances, and muffled rollocks, convey an idea of energy and activity fully sustained by the character of the Fremantle resident whaling parties. The jetty is built of the "Jarrah" timber of the country, which defies even the sea-worm. Its piles and beams, sunk above fifteen years ago, are as sound as the day they were put down.

Another town, or rather scattered hamlet, in Perth county, named *Guildford*, is advantageously situated at the confluence of the Swan and Helena rivers, about seven miles north-east from Perth, and four miles from the foot of the Darling range. It stands upon the high part of the alluvial flat fringing the river, which extends from half a mile to one mile from it on either side. This flat is so rich, that Captain Stokes states it produced, in 1813, after thirteen years of successive cropping, without manuring, a more abundant harvest than it had done at first. This officer notices, also, that in the year 1833 (a period when the settlers were in want of food), a flight of strange birds, resembling the rail, but larger, appeared in vast numbers near Guildford, when the corn was green: they were so tame, as to be easily taken by the hand; they disappeared in the same mysterious manner as they had arrived, and have not since been seen. There are no stock-farms, properly so called, in this district, and the tillage farms are generally small.

Monger's Lake is situated in a flat, barren tract, about three miles from Perth, and when filled, during the wet season (June), occupies an extent of five miles. There is another lake contiguous. Summer gardens have been formed by the settlers on the borders of these lakes, which yield plentiful crops of melons, carrots, potatoes, and other vegetables. The scenery around, when the beds of the lakes are dry, is very dreary; but in June, the margin of the water is exquisitely carpeted with flowers.

The remarkable stalagmitic caves of Maidin, lie about thirty-five miles in a north-north-west direction from Perth, the route being along a chain of beautiful lakes situated from four to six miles behind the sea coast, whose fertile banks afford luxuriant feed for live stock. These caves have been partially explored by Mr. Roe and Mr. Webb, and are somewhat similar to the caves near Bathurst, and in Wellington valley, New South Wales (see pp. 398–9 and 472). Six of the Maidin caves examined by Mr. Roe, presented a magnificent appearance; a narrow passage of a few yards expanded suddenly into open extensive chambers, which were traversed to the distance of 180 feet, and found to have an average width of forty-five feet, and a roof of twelve to fifteen feet, thickly studded with beautiful stalactites, some descending to the floor and forming pillars of ten to twelve feet in circumference, for the support of the roof. The floor was covered with layers of smooth, white, and semi-transparent stalagmite. Another chamber, eighty feet long by thirty feet wide, had stalactites of all shapes and sizes suspended from the roof. The cavernous entrances are in some picturesque rocky glens near Mambibby lake. The aborigines consider these recesses the abode of evil spirits.

Murray county differs from Perth chiefly in having hardly any lakes, except large swamps on the Serpentine river, fewer rich flats, and more clay upland. It has a few town sites, but no town; the church and barracks at Tingarra are very prettily situated, and form the nucleus of a thriving village. The main streams are the *Murray*, *Dandalup*, *Serpentine*, and *Harvey*. The chief stock of this district are horned cattle and pigs, and its principal produce wheat of fine quality. The farms are generally so well fenced, as to admit of the practice which prevails there, of turning pigs loose in the forest till wanted, and whole herds of these animals wander about at will.

This county, like Perth, includes a portion of the great forest of the Darling range, and is, like it, covered with wood, even on the plain, which is however more hilly and undulating; but the valleys along the range are finer, and abound in permanent rills, and even waterfalls of much beauty, which will eventually prove useful for mills.

Wellington County bears the same general character, but is sufficiently south to render the difference of climate perceptible. In

some parts the grass remains green and the rivers run all the year. It may be considered the finest district outside the range, and offers many inducements to the emigrant. It contains several town sites, but only the seaport of *Bunburry* (see coast-line) is inhabited. The *Harvey, Brunswick, Collie, Preston,* and *Capel,* are fine streams, with much rich land on their banks. All kinds of stock thrive well.

It is probable that this district will become the first scene of operations of the Western Australian Timber Company, now in process of establishment, as the naval timber comes down nearer to the port here than anywhere else on the west coast, and some fine cargoes have already been shipped from Bunburry.

Sussex County exhibits, as its leading and distinctive features,—extensive low flats of brown loam, swampy country, open downs, and dense forests; the whole fitted rather for English than Mediterranean produce, and for horned cattle and horses rather than sheep. The chief settlement is on the Vasse inlet, in Geographe bay. This bay affords sufficiently secure anchorage, and whalers resort here constantly for fresh meat, water, potatoes, and other vegetables, butter, cheese, &c., all which are produced abundantly and of the finest possible quality. The cheese of this district is celebrated. It consists of two kinds, one resembling Stilton, the other Cheddar. The potatoes are the finest in the colony; and its butter finds ready market even in Perth.

There is no settlement in this county, except that at Augusta; but there is much fine country. Proceeding along the south coast, we come to the

Lanark and *Stirling Counties.*—These do not possess any settlements; though they have, no doubt, especially the latter, abundant sites for farms, and are intersected by numerous rivers and estuaries, some of which might easily be converted into harbours. The timber is the largest in the colony; and its stupendous size may be imagined from the fact, that a seven-ton vessel was entirely built out of the material furnished by a single junk, of thirty feet length, cut off one end of a tree. It often runs 150 feet in height, before it divides into branches. The timber is of excellent quality for building purposes, especially for ships. Stirling county has fine timber and good land.

Plantagenet County contains King George's Sound harbour, and the town of *Albany.* The soil is generally of inferior description, although there are several fine farms. The town of Albany is handsomely situated, on a high ground, overlooking Princess Royal harbour, with two bold and picturesque granite hills, Mounts Melville and Clarence, on its right and left. The climate of Albany is by many preferred, as being cooler than Perth; but is liable to high winds, and comparatively less fitted for Mediterranean produce, &c. The scenery in the neighbourhood is in many places beautiful.

Among the detached mountain masses in this part of Australia are the Toolbrosnap hills, of which the most eastern height, Koykynarap, attains an elevation of 3,500 feet. It is ninety miles north of King George's Sound, and seventy miles from Leschenault, and there is a valuable agricultural and grazing country around.

Kent County is the last settled portion of Western Australia to the south-east; and it only claims that title by virtue of a few stations near Cape Riche. It is not much known, but contains some fine country, and will derive future importance from the fact, that the great Western Australian coal formation crops out in seams within a short distance of the harbour of Doubtful Island Bay, where there is also a fine district of country.

Hay, Goderich, Peel, Wicklow, Minto, and *Grantham Counties,* as we proceed northward, are uninhabited by Europeans; they contain all varieties of soils; and are generally hilly, intersected by streams and rivers, and well timbered; they include the eastern portion of the Darling range, and bear a considerable similarity to

York County, the first settled district "over the hills." This, with the adjoining county of Victoria, long formed the chief stock districts, but the settlers have lately penetrated above 200 miles northward. These two countries are still, however, of chief importance, both for agriculture and pasturage. In appearance they are very unlike the plain of Quartania or Darling range, presenting a continually undulating surface, sometimes almost mountainous, always wooded, but seldom so as to obstruct the plough. The best farms are generally on the rivers Avon and Toodyay; but this is not on account of the soil, which is as good in the back lands, and often on the tops of the hills; but on account of the surface water. The soils are chiefly red and brown loams; sand is rare. The country abounds with building stone; but lime has not been found, unless

in a few places. The farmhouses are generally built of stone and clay, or rammed earth, and are often very well constructed; they have all verandahs, and are not unlike the Indian "bungalows."

Victoria County much exceeds York in quality of soil, in beauty of scenery, and, indeed, in all respects. The Toodyay valley contains noble farms, both for stock and tillage.

From these districts northward, the settlements are more of the squatting character, with the exception of the rich Gingin agricultural district, on the borders of Perth and Twiss counties, and the Moore river farms in Melbourne county. On the latter is a settlement of Spanish Benedictine monks, with a bishop, who carry on farming, pastoral, and vineyard operations, for the purpose, as they state, of civilising the aborigines.

The eastern counties of Howick, Beaufort, Lansdowne, Durham, Carnarvon, Grey, &c., are little traversed or known, and are not likely to be settled so long as good lands remain open for that purpose nearer the coast.

It appears that up to the year 1847, the lands granted and purchased in fee-simple in Western Australia amounted to 1,319,973 acres, and the lands sold, to 8,925 acres = 1,328,899 acres. The estimated number of acres that remained ungranted in 1848, was 19,201,274. There is, therefore, abundant space for the extension of a white population; and even after making all due allowance for exaggerated estimates, the available land discovered in the neighbourhood of Champion bay would support a very large number of inhabitants.

Geology.—Along the coast-line of Western Australia there is a continuous bed of limestone, covered in many places by sand dunes. The table-land of the Darling range consists of sienitic granite; to the north, near the Murchison and Irwin rivers, is an elevated tract of new red sandstone.

Throughout the greater part of Western Australia there is an absence or scantiness of the *secondary* or transition rocks; all the *tertiary* appear to be of the newest kind, and to lie in juxta-position with the primary.* On the east side of the Darling range, close to the base, are several groups of isolated conical hills, about a mile apart, bearing on their summits strong marks of ignition, and extending from the William river to the Toodyay district. Further east, the country passes into sandy plains, intersected by water-courses, somewhat similar to those on the western side of the range. On the mountains, as well as on the plains, pebbles are to be met with in patches, containing magnetic iron.

Mr. J. W. Gregory is of opinion, *first*, that the Darling range possesses no true anticlinal axis, but is a sudden break and descent from the table-land of the interior to the plain of Quartania, which will account for the non-appearance of the silurian system, and the very narrow belt of chlorite and clay-slates; *secondly*, that the Darling range attained nearly its present elevation (that is compared with the other strata, but not with regard to the actual sea level) before the period of the coal formation; *thirdly*, that the range formed the sea-coast during the deposition of coal, and its accompanying shales, appears probable from the beds of marine shells interstratified with them; that after this period the whole country was immersed, while the new red sandstone was deposited, as this formation extends over all the known portion of Western Australia, after which the whole of the present land was upheaved, and without great violence, as this sandstone is remarkable for the horizontal position of its upper strata, and it has not since been submerged, with the exception of the present line of coast where a narrow belt of limestone hills, containing shells of existing species, and the water-worn boulders on the western coast of Sussex, indicate a more recent change of elevation than that which upheaved the new red sandstone above the influence of the sea. Mr. Gregory thinks it is also remarkable that the absence of intermediate strata between the older slates and the carboniferous system, and also between the new red sandstone and the tertiary rocks, has been observed on the eastern coast of Australia, and in similar parallels of latitude.

Mineralogy.—The geological characteristics, and the position of the mountain ranges, indicate a rich mineral country, and recently copper, silver, lead, and coal, have been found, of an excellent quality, in the newly explored region in the vicinity of Champion bay. Iron also abounds.

The mines explored on the Canning river are curious; they all begin with lead, copper, zinc, and iron, mixed, but as the shaft is sunk, the zinc predominates; in one (the fifty acre) section, there is a regular lode of

* Mr. Bynoe, surgeon to H.M.S. *Beagle*.

zinc yielding (66 lbs. 11 oz.)* sixty-six per cent. on assay. The Matrix is a quartz lode about two feet wide, and full of bits of ore, sixty-six per cent. of zinc. The country is soft granite, and is expected to pass into slate. The galena or sulphuret of lead ore discovered recently near the Murchison river, when analyzed (22nd May, 1849) by Sir H. T. De la Beche, at the Museum of Practical Geology, in London, at the request of Earl Grey, was found to contain sixty-five per cent. of lead, and pronounced to be "therefore a good ore, and if found in abundance, very valuable to the colony."

The coal bed discovered by the Messrs. Gregory on the Irwin river, 210 miles north of Fremantle, and forty miles from the sea, is in two seams in the following order of stratification:—red sandstone, black shale, white clay, *coal* five feet thick; red sandstone, black shale, white clay, *coal* six feet thick; the strata then deepened, and the next coal seam was hidden. The first 100 feet of depth consisted of coarse red sandstone. The coal burns well, blazes brightly, and consumes to a white ash. It is supposed that the coal bed continues in a south-east direction to the southern coast of Australia, near Doubtful Island bay, where coal has been found cropping out close to the coast.

Soil.—Very various; there are many extensive wastes, but there are also numerous rich alluvial flats, and the limestone and coralline sandy strata on the Quartania plains, when irrigated, yields good crops, especially of Mediterranean produce. The vine, olive, and tobacco thrive luxuriantly; the silk-worm might also be extensively reared, as the mulberry is well suited to the soil and climate.

The geological formation of Western Australia renders it as easy to get water there by sinking Artesian wells at a depth of fifty feet, as it would be in Europe at five hundred feet. Dr. Van Sommer calculates that by a fortnight's boring two men with an engine could obtain a supply of water sufficient for the irrigation of 500 acres.

Climate, dry and warm, near Perth; and of acknowledged salubrity. Along the south coast the temperature is much lower, and there is more rain. Western Australia is not subject to the droughts which prevail on the east coast; it is open also to the influence of the monsoons, and the annual fall of rain is greater than in some parts of England. The hot winds blow from six to twelve days in the season. The mean of the thermometer at 9 A.M. is 60° to 62°; at 3 P.M. 68° to 70°. *Winter*—9 A.M. 52°; 3 P.M. 59°. *Summer*—9 A.M. 69½°; 3 P.M. 80°. The summer commences about the middle of November and continues to the middle or end of April. December, January, February, and March are the hottest months in the year; but in the warmest weather labourers may work all day in the open air, with no more inconvenience than on a summer's day in England. The adaptation of the climate for an European population is shown by the state of the ages and number of the inhabitants.

In October, 1848, the census returns showed, that out of 4,622 inhabitants, there were, under three years of age, males, 267; females, 244: from three to fourteen years, males, 606; females, 605: from fourteen to sixty years, males, 1,820; females, 913: beyond sixty years of age, males, 30; females, 17.

The abstract of the census of 1848, which I have received, does not show the proportion of births to deaths, nor of males to females born: but in two preceding years, the relative proportions were—

Year.		Births.	Deaths.	Difference.
1842–3	Females . .	85	9	77
	Males . . .	83	32	51
1843–4	Females . .	107	16	91
	Males . . .	86	37	49

Preponderance of female over male births, in two years, was 23. The net increase of female births over deaths was 167, and of males, 100. This confirms an observation made in a previous part of this work—that in a salubrious climate, fertile soil, with sufficiency of food and comfort, and among a free people, it appears to be a fixed law of population that the female shall predominate over the male births.

The colonial surgeon, Mr. Ferguson, gives the following comparative statement of deaths among 1,000 people, in several places:—Western Australia, 12; New South Wales and Van Diemen's Island, 15; Cape of Good Hope, 16; Nova Scotia and New Brunswick, 18; East and West Canada, 20; Gibraltar, 22; Ionian Islands, 28; Mauritius, 30; St. Helena, 35.

* The best English zinc ores, those of Allowhead, in Northumberland, contain no more than 58 lbs. 13 oz. in the 100 lbs.

Zoology.—The native animals of Western Australia are similar to those of the other colonies of the island-continent: they are few in number, and very peculiar in kind. Of all the known mammalia, but fifty-eight species, or about the one-seventeenth part of the whole, belong originally to this region; and of these, more than one-half are of the *marsupial* order. Of Cuvier's order of *carnivora*, if we except the marine mammals of the seal genus (*phoca*), the dingo, or native dog, is the sole representative, and the important orders of *quadrumana*, *pachydermata*, and *ruminantia*, appear to be without any land representatives in this large portion of the globe. Of the *edentata*, the genera *echidna*, and *ornithorhynchus*, are destitute of teats, and do not suckle their young. The former genus (*echidna*), consists of two species of porcupines, one entirely covered with thick spines, the other clothed with hair, in which the spines are half hidden. The *ornithorhynchi* consist also of two species—*O. rufus* and *O. fuscus*. These creatures unite with the body, the fur, and habits of a mole, the webbed foot and bill of a duck; are ovoviviparous, and have the internal formation of a reptile. They are very shy, and lead a burrowing life in the mud of rivers and swamps.

Of the *rodentia*, two species belong to the sub-genus *hydromys*, and consist of creatures that seem to unite some of the peculiarities of the dormouse, rat, and beaver. A new genus of *rodentia*, discovered by Mitchell, and called by him the flat-tailed rat, is remarkable for the enormous nest of branches and boughs, which it builds so strongly, as to be proof against the attacks of the dingo, or native dog. The rabbit rat, which climbs trees like the opossum, is described by Mitchell, as having feet resembling those of a pig, the marsupial opening downwards, instead of upwards, as in the kangaroo, and about the size of a rabbit, but without a tail. Two species of mice (both peculiar), and the *dipus Mitchellii*, Australian jerboa, are included in the list of *rodentia*, and the *mymecobius rufus*, or red shrew-mouse, is sometimes considered as belonging to that order. With these few exceptions, the whole of the Australian mammalia are of the *marsupial* order, of which there are many species; the only character common among them being what has been termed the premature production of their young; for even in the few kinds of *marsupialia* not possessed of pouches, the young hang to the *mammæ* of the mother for a considerable time. The most numerous and important are the several varieties of the well-known kangaroo (*macropus*), one species of which (*macropus unguifer*), has the singular appendage of a nail, like that on the little finger of a man, attached to its tail: the others are the different species of opossums, bandicoot, or ponched badger, a sort of sloth (*phascolarctos*), the wombat (*phascolomys*), an animal about the size of a badger, and very slow in its movements, and the kangaroo rat (*pataroo*), a diminutive kangaroo.

Ornithology.—The list of Australian birds present but two orders, wholly peculiar, namely, the *syndactyles*, of which the most beautiful are "the sacred kingfisher," the variegated bee-eater, the charming little trochilus, or humming-bird, and the *scansores*, consisting of parrots, parroquets, cockatoos, &c., which are very numerous, and adorned with every variety of gorgeous plumage. Among the order *accipitres*, is a species of vulture, so fierce, that when pressed by hunger, he has been known to attack the natives themselves. The white eagle is also a very rapacious bird. The cream-bellied falcon, the orange-speckled, and the milk-white hawk, are common varieties; the last especially makes great havoc among the poultry. Of the owls, the most numerous is the bird called the cuckoo by the colonists, and "buck-buck" by the natives, from the cry which it reiterates during the winter nights. The order *dentirostres* includes a beautiful bird, having the habits of the red-breast; several varieties of the thrush, one of which has obtained the soubriquet of the *laughing jackass;* a description of field lark, and the wattle bird, which utters a chattering note; swallows and goat-suckers, of the order *fissirostres*, are numerous.

Conirostres.—There are several magpies and crows of this order, and beautiful birds of paradise, but the latter, like the various species of *epimachi*, are confined to northern Australia.

Gallinæ.—Pheasants, quails, and pigeons are in considerable numbers, of the latter the most remarkable variety is the *bronze-winged.* Grallæ.—The cassowary or emu is found in nearly all parts of Australia. It is a very wild creature, and runs more swiftly than an English greyhound. The eggs are of an elongated form, and of a green colour; the flesh though coarse is eatable, especially that of the young. Australia has also some species of bustard, curlew ibis,—some of a

glassy rifle-green; herons, avasets, rails, snipes, spoonbills, &c.

Palmipedes.—The black swan is found here. Gannets or boobies are numerous, especially on the north coast, where penguins, petrels, and ducks also abound. The *cereopsis* somewhat resembles the goose.* Vampires of a large size are numerous.

Reptilia.—The reptiles of Australia consist of two or three genera of turtles; as many varieties of alligators, a considerable number of lizards and serpents, both venomous and harmless. The great *lacertæ*, as alligators, &c., do not appear to have been found in Western Australia. The land-lizard, and the crimson-sided snake (*Coluber porphyriacus*), are of extraordinary beauty. Serpents, also, of different species, have been seen floating upon the water, in chase of the curious ponquin. Frogs are numerous. A variety of lizard (the *chlamydosaurus Kingii*) is remarkable for a *frill* behind the head and above the shoulders.

Insecta.—The insects are very numerous, and many of the butterflies, moths, and beetles, are brilliant and beautiful. Locusts abound in the hottest season. In swampy places mosquitoes are extremely troublesome, but they are scarcely known in the upper lands. Scorpions and centipedes are found among dead wood. Wild bees swarm in many places, depositing their delicious honey in the hollow trees. Flies, especially the blow-fly (*musca carnivora*) are numerous in some districts. The gum-grub, an insect about six inches long, is esteemed by the natives a great dainty, and there are various species of ants in Australia, some of which are provided with wings. Ant hills have been found measuring thirteen feet in height, and seven at the base, tapering gradually to the summit.

Botany.—The vegetation of Australia has been frequently alluded to, and will be more fully dwelt on in describing that of Van Diemen's Island, which it closely resembles.

CHAPTER III.

POPULATION, EUROPEAN AND ABORIGINAL—LAND IN CULTIVATION—LIVE STOCK—LOCAL RECEIPTS AND EXPENDITURE—PARLIAMENTARY GRANTS—VALUE OF COMMERCE—SHIPPING—STAPLE PRODUCTS—TARIFF OF DUTIES—ITEMS OF TAXATION—GOVERNMENT—RELIGION—EDUCATION—CRIME—THE PRESS—PRICES OF PRODUCE—COLONIZATION ASSURANCE COMPANY—TRANSPORTATION TO WESTERN AUSTRALIA. SUMMARY—STATISTICS OF FOUR COLONIES IN AUSTRALIA.

The disastrous state of affairs at the early formation of the colony, precluded the collection of statistical returns, and it is only within the last few years, that any complete Blue Books have been received at the colonial office. By an examination of various statements and authorities, I have endeavoured to frame the following connected view of the state of the colony from 1834 to 1848, in its different aspects of population, cultivation, farming stock, revenue, and expenditure, commerce, shipping, &c. From this document the present social condition of the country will be seen; and it may be noted, that for the last five years there has been a progressive advancement in population, cultivation, trade, and other elements of prosperity. In 1830, the white population were computed at 1,500; in 1831, there were 200 acres of land under cultivation with the hoe and spade, and 100 acres of wheat were reaped; in 1832, there were 440 acres of grain crops; and in 1833, 600 acres; the progress has since been—

* The habits of the Australian birds are most peculiar; one, commonly called the *bower bird*, builds for itself a kind of roofed and sheltered pleasure-ground (see Gould's *Australian Birds*); another, the *megapodius tumulus*, constructs a nest in the form of an irregular truncated cone on an oblong base, one of which Captain Stokes found to measure 150 feet in circumference; the slope of its sides being from eighteen to twenty-four feet, and its perpendicular height ten or twelve feet. It was composed of earth, fragments of coral or stone, and pieces of stick. On examining these mounds by clearing away three or four feet of earth, the eggs of the bird were found, measuring eight and a-half inches lengthwise in circumference, and six and three-quarters across. There was no increase of temperature in the mound.

The following Statement shews the Condition of the Colony as respects Population, Acres under Cultivation, Live Stock, Income and Expenditure, Commerce, Shipping, and Exportation of Staple Products, between 1834 *and* 1848*: it has been prepared from various returns and documents, with a view of tracing the Progress of the Colony since its formation. I could not obtain any reliable data between* 1829 *and* 1834.

Population, Land, Live Stock, &c.	1834.	1835.	1836.	1837.	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.
European Population :—																
Children, under 12 years	—	—	—	547	—	—	592	—	—	1,188	—	—	—	—	—	—
Males, above 12 years	—	—	—	858	1,152	1,302	1,205	1,706	2,115	1,714	—	—	—	—	2,818	—
Females, above 12 years	—	—	—	442	776	852	557	1,054	1,361	951	—	—	—	—	1,804	—
Total	1,600	—	—	1,847	1,928	2,154	2,354	2,760	3,476	3,853	—	—	—	—	4,622	—
Acres under Cultivation :—																
Wheat	564	1,156	1,363	1,253	1,400	1,471	1,650	1,899	2,039	2,884	3,283	3,313	3,977	2,975	3,316	—
Barley	100	155	209	253	240	260	337	335	444	447	538	522	506	554	672	—
Oats	116	126	128	141	100	98	48	130	129	120	79	63	125	51	133	—
Rye	—	1	7	5	16	77	50	33	71	32	28	15	58	50	100	—
Maize	—	—	—	—	—	—	—	—	—	4	17	19	31	20	38	—
Potatoes	15	31	32	36	—	—	50	—	71	81	77	76	139	—	120	—
Vineyard	—	—	—	—	—	—	—	—	—	—	—	—	—	—	114	—
Olive ground	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10	—
Kitchen garden	—	80	112	115	—	—	200	225	280	274	306	269	299	271	224	—
Green crops	123	85	240	276	701	819	800	706	330	713	532	551	—	1,862	2,320	—
Total	918	1,634	2,091	2,079	2,457	2,725	3,135	3,328	3,364	4,566	4,860	4,830	5,137	5,784	7,174	—
Live Stock :—																
Horses	162	167	216	254	271	367	500	858	1,069	1,202	1,231	1,430	1,727	1,841	2,095	—
Horned Cattle	500	646	829	837	1,052	1,308	2,318	2,917	4,122	4,861	5,376	6,508	7,583	8,699	10,919	—
Sheep	3,500	5,138	8,527	10,271	15,590	21,038	30,161	44,551	60,380	76,191	86,482	95,681	102,084	114,124	141,123	—
Swine	—	550	819	704	970	1,235	1,595	8,161	1,713	1,951	1,702	—	2,953	2,963	2,287	—
Goats	—	657	1,289	1,690	2,436	—	4,604	5,547	5,615	3,733	3,227	2,632	2,223	1,766	1,431	—
Total	4,162	7,158	11,680	13,756	20,319	23,948	39,178	62,034	72,899	87,938	98,018	106,251	116,570	129,393	157,855	—
Local receipts of revenue in £	—	6,884	—	4,586	5,193	3,912	9,376	11,646	9,970	10,312	9,754	7,127	7,853	8,453	10,723	—
Parliamentary grant expenditure in £	—	5,291	6,153	7,230	6,945	7,008	5,373	6,819	7,961	7,479	7,092	7,090	7,250	6,893	7,695	—
Commissariat, military expenditure in £	—	8,708	8,049	11,544	11,344	13,199	11,440	13,219	12,344	10,752	9,973	10,746	9,864	10,265	11,545	—
Value of commerce :—																
Imports in £	—	50,000	50,636	39,283	45,401	40,000	—	—	37,486	36,441	36,685	20,349	25,959	25,463	45,411	—
Exports in £	1,020	1,740	2,850	6,906	6,840	5,448	—	—	7,089	13,364	13,609	13,353	20,223	24,535	29,598	—
Shipping inwards, in tons	3,120	4,048	5,587	3,031	—	16,805	59,611	39,850	32,496	17,130	10,002	7,855	6,365	5,406	5,494	—
Wool Exported :—																
Quantity in lbs.	—	—	—	—	—	36,450	50,000	—	84,640	122,495	140,155	145,254	291,368	229,247	301,965	—
Value in £	—	—	—	—	—	2,278	—	—	—	6,125	7,008	7,257	13,363	11,464	9,666	—

Note.—There are no census returns between 1843 and 1848. The agricultural returns do not include King George's Sound, the Vasse, and Port Augusta districts. There are no returns of the imports and exports for the years 1840 and 1841, nor is there any return of shipping for the latter year. We have no return of the wool exported from the colony in the year 1841. Wherever there are blanks in this table no returns are procurable.

Aborigines.—The state of the aboriginal inhabitants in Western Australia is far superior to that attained by them in any other Australian colony. This most honourable peculiarity, however, though doubtless attributable, in the first instance, to the personal character and conduct of the early settlers, of whom an unusual proportion belonged to the better classes of society, and to the judicious policy pursued by the local government, appears to have been, nevertheless, in no small degree brought about by the very fact in other respects so injurious to the colony, namely, the sudden cessation of immigration, which not only left the same individuals to carry out the original system with regard to the savage, but rendered caution and forbearance, as well as firmness, obviously indispensable. The settlers are reaping their well-merited fruits, in the perfect tranquillity they enjoy, and the very considerable assistance they receive from the coloured population. So completely have the natives learned to appreciate their rights as British subjects, that they now appeal to the tribunal of the law in their differences with the "white fellows," and occasionally even in those with each other.

The numbers receiving regular and casual employment in 1848, was—

County or District.	Males.	Females.	Total.
Perthshire . .	130	32	162
Yorkshire . . .	65	10	75
Wellington . .	65	11	76
Plantagenet . . .	53	7	60
Toodyay district . .	52	53	105
Sussex	47	8	55
Murray	6	2	8
Total	418	123	541

Of these, many are employed about the farms as herdsmen and messengers, and occasionally in reaping and harvest work, some, more regularly as servants; but in general, they refuse all hard or steady work, and no wages will induce them to forego any amusement, or to settle permanently in one place. They are essentially creatures of impulse, absolutely devoid of any desire to better their condition, and inclined to look with contemptuous superiority upon the laborious habits of their new associates. "White fellow," say they, "fool, too much! work, work, always work! Black fellow play, plenty play!" They appear, nevertheless, to be attached to the "white fellows," and are a merry, harmless, idle, good-natured race; sometimes very useful, often most provoking; on the whole, honest, but afflicted with a constitutional preference of mutton to kangaroo, which is the fertile source of compulsory labour on the roads.* Schools have been established for the children, and an institution is maintained by the Wesleyan body, assisted by government, at which indefatigable and judicious efforts are made to infuse into their minds the principles of religion and social improvement. Their quickness of apprehension as shown in the facility with which they learn reading, writing, arithmetic, &c., is said to *greatly surpass that of the white child*, and the mere experience of the schools would warrant the highest expectations of their future acquirements; with puberty the inherent idleness, and the restless longings after the wild and wandering life of the bush, are developed—and the clean, bright, intelligent child, able, not merely to read, but to understand what he reads, merges into the filthy, lazy savage, gorging himself to stupidity, and basking under a gum-tree. In some instances, however, the persevering care of the teachers has succeeded in inducing a few to remain on the establishment, to marry, and cultivate land for their own support.

The classified occupations of the white population in 1848 was, in—

Agriculture.—Occupiers, employing labourers, 124; ditto, not employing labourers, 176; agricultural labourers and gardeners, 476.

Grazing.—Employed in the care of sheep, 121; of cattle, 24.

Trade.—Shopkeepers, and other retail dealers, and their assistants, 64; bricklayers and masons, 32; smiths, 22; carpenters, joiners, plumbers, and glaziers, 98; tailors and shoemakers, 39; sawyers and splitters, 49; other non-agricultural classes, capitalmen: these are all brought from Rottnest. The men who go from Fremantle to Mundurah, Bunburry, and Vasse, are also prisoners. We have no less than four native prisoner boys generally serving on board the *Champion*. You would be surprised to see one of them steering the vessel, going aloft to reef a topsail or furl a royal. The governor has one now for a body servant, and a number of our teams are brought into town by them."

* In a recent letter from Western Australia, dated March, 1850, is the following statement:—"We run the mail to York, to Bunburry, and to Vasse once a week, with natives only. The York native is mounted, and costs us some £36 a year. The Perth and Fremantle and the Guildford mails are run daily, *with the utmost punctuality, and cost but the natives' rations, as they are prisoners on their parole*, and there is a spare man in case of the sickness of any of these

ists, bankers, professional, and other educated men, their clerks and assistants, 44; civil officers, their clerks and assistants, 69; labourers, employed in labour not agricultural, including mariners, boatmen, fishermen, toll-collectors, road-makers, carters, &c., 241; domestic servants (male), 55; military men, 103; all other males, above fourteen, not included in the above, 106. Residue (women, children, and others), 2,690.

The state of each of the settled districts is thus shown on the 10th October, 1848:—

Population, Land, Live Stock, &c.	Perth County.	York County.	Wellington County.	Plantagenet County.	Toodyay District.	Sussex County.	Murray County.	Total.
Population:—								
European, males	1,415	425	217	186	258	142	98	2,818
„ females	1,098	199	141	114	107	82	51	1,804
Total	2,513	621	358	300	365	224	149	4,622
Aborigines, males	302	—	—	300	—	100	39	—
„ females	221	—	—	150	—	50	34	—
Total	553	134	300	450	300	150	73	1,960
Acres under Cultivation:—								
Wheat	1,064	771	406	92	484	126	371	3,316
Barley	143	172	99	35	106	103	11	672
Oats	113	9	—	4	7	—	—	133
Rye	44	15	6	5	5	20	3	100
Maize	29	1	—	5	—	2	1	38
Potatoes	48	1	20	13	2	33	3	120
Vineyard	90	11	7	—	2	1	1	112
Olive-yard	8	—	2	—	—	—	—	10
Kitchen garden	146	21	24	12	10	15	15	243
Green crops	990	494	69	44	355	184	184	2,320
Live Stock:—								
Horses	394	610	124	251	460	184	72	2,095
Horned cattle	2,873	1,483	1,729	505	1,682	1,472	1,175	10,919
Sheep	8,888	62,409	3,415	9,582	49,180	6,020	1,629	141,123
Swine	786	543	167	85	367	134	205	2,287
Goats	1,050	25	198	—	31	43	84	1,431

Note.—The total of the return of European population includes the troops stationed in the colony, their wives and children, numbering altogether 162. It also includes 77 males and 12 females = 89, on board colonial vessels and on emigration parties. Of the aborigines 418 males and 123 females are regularly or casually employed by the Europeans.

Government.—The colony is at present ruled by a governor, aided by an executive council, consisting of the colonial secretary, advocate-general, surveyor-general, and collector of revenue. There is also a Legislative Council, composed of the above, in conjunction with the civil and criminal judge, and with three non-official members appointed by the crown; but it is probable that a more popular form will soon be adopted, under the provisions of a bill for the "better government of her Majesty's Australian colonies," which has undergone full discussion in both houses of the Imperial Legislature, while this volume has been passing through the press, and received its final decision in the House of Commons on the 1st August, 1850. The provisions of this bill, as first introduced to parliament, in March last, are stated at pp. 555—560: since then, the bill has undergone several modifications in the House of Lords. The proposed power to create a Federal Assembly of the Australian colonies, which, I feared, would prove a source of contention (see p. 558), has been withdrawn, as also the power to dispose of the crown lands by the said Assembly (see note, p. 554): the qualification of voters is fixed at the possession of a freehold estate, of the clear annual value of £100; a £10 household franchise; or the possession of a leasehold estate or licence to depasture lands from the government, of the value of £10 sterling per annum. Under the amended bill, the colonial Legislative Councils have power to alter the qualifications of electors, and to divide the Legislative Council into two chambers; but they have not the power to declare there shall be a single legislative chamber, or that the nominees of the crown, whether official or non-official, shall be altogether excluded from that chamber. A Legislative Council may be established in Western Australia, as in the other Australian colonies, if petitioned for by not less than one-third in number of the householders within the colony, provided the province undertakes to defray the expenses of the civil establishment, which have been heretofore borne by the Imperial Parliament, such sums to be permanently granted to the crown out of the colonial revenues, and to form a civil list.

Military Defence.—About 100 men, including three officers, stationed in different places. There are barracks at Perth capable of holding sixty men; also small barracks at Albany, Kogonup, Bunburry, York, Pingarra, and Rottnest Island.

Religion.—The religious denominations in the colony, October, 1848, were—church of England, 3,063; Wesleyan methodists, 276; independents, 187; other protestant dissenters, 188; protestants, 311; church of Rome, 337; Mahomedans and Pagans, 90; religion not specified, 169. The church of England colonists in Western Australia have built ten churches—and several temporary places of worship—have subscribed 8,000 acres of land towards a bishopric fund, and have contributed liberally towards the maintenance of their clergy and the establishment of schools. The church at Perth, capable of holding 1,000 persons, has cost £3,500, and that at Fremantle, £1,500. There are three clergymen of the established church, under the supervision of an archdeacon; and three of the church of Rome, under a Roman catholic bishop. There are also several exemplary dissenting ministers.

Education.—The governmental schools are under a board of education; the instruction is entirely secular. In the Roman catholic schools the Irish national system is adopted.

Schools.	No.	Male Pupils.	Female Pupils.	Total.
Governmental:—				
Perth	2	55	28	83
„ infant	—	27	33	60
Fremantle	2	26	10	36
Murray	1	9	5	14
Guildford	1	18	6	24
York	1	28	—	28
Albany	1	14	19	33
In connection with R. Catholic Church	3	61	105	166
Total	11	238	206	444

The Press.—Two well conducted newspapers are published at Perth, and an excellent Western Australian almanac, replete with useful topographical and statistical information, has been published in the colony for the years 1842 and 1849.

Crime.—Number of *felonies* in 1848—whites, 11; blacks, 47. Of *misdemeanours*—whites, 14; blacks, 4.

Taxation.—The duties levied in Western Australia, in 1848 (Blue Book), were:—On spirits imported, the produce and manufacture of any part of the British empire, 6*d* per imperial gallon; ditto foreign produce and manufacture, 8*s*. per gallon; wines, produce and manufacture of British empire, 6*d*. per gallon; ditto, foreign, 1*s*. 6*d*. per gallon; cigars and snuffs, 2*s*. 6*d*. per lb.; tobacco of all other kinds, 1*s*. per lb.; live stock imported from any part of the British empire, 6*s*. per cent., other places, 12*s*. per cent.; goods, ware, and merchandise, the growth, produce, or manufacture of any part of the British empire, not otherwise charged with a specific duty, 6 per cent.; ditto of any foreign state, 12 per cent. *Internal duties*—Auction duty, 2½ per cent.; on registering transfer of landed property, 1 per cent.; spirit licences, £10 to £25 per annum; auctioneer and attorney licences; dog tax; licences to cut timber, on 640 acres, £20 per annum, or 10*s*. a month for each pair of sawyers; licences to occupy crown lands for pasturage, from £10 per annum for 4,000 acres, to £20 per annum for 20,000 acres. Licences for boats and for boatmen, warehouse rents, &c.

The revenue raised in Western Australia for three years was—

Details of Revenue.	1848.	1847.	1846.
Duties on spirits	£3,494	£3,689	£3,475
„ wine	507	403	288
„ tobacco	910	658	790
„ goods imported, *ad valorem*	2,143	1,533	1,393
„ goods sold by auction	92	84	117
„ transfers of land	22	44	35
Licences to sell spirits	547	482	498
„ to sell by auction	31	32	15
„ to keep dogs	80	41	51
Warehouse, rent of	—	—	—
Spirits in bond	111	48	33
Fees of public officers	107	164	148
Post-office department	298	296	332
Total	8,345	7,674	7,175
Sale of crown lands	463	251	124
Licences to occupy ditto	576	920	258
„ to cut timber	226		
Perth jetty dues	24	20	63
Repayment of crown debts	611	99	283
Rottnest establishment	158	69	39
Judicial fines and forfeitures	39	101	54
Miscellaneous	41	1	165
	2,147	1,461	986
On account of parliamentary grant	7,695	6,893	7,250
On account of juvenile immigrants from Parkhurst	277	—	—
Grand total	18,464	16,028	15,411

The civil expenditure in 1848 was—

Departments.	From Parliamentary Grant.	Colonial Fund.	Total.
Audit office	—	£293	£293
Colonial secretary's office	£681	127	808
Colonial treasurer's office	—	63	63
Commandant	177	—	177
Customs revenue	—	891	891
Council	—	150	150
Ecclesiastical office	292	376	668
Governor's office	1,118	100	1,218
Harbour-master	—	512	512
Medical department	266	270	536
Natives and native schools	744	221	965
Police force	—	690	690
Post-office	—	596	596
Public works	—	845	845
Registrar-general	—	20	20
Registrar of deeds	—	62	62
Roads and bridges	—	468	468
Rottnest establishment	—	393	393
Schools	—	212	212
Surveying department	1,620	961	2,581
Judicial department	1,558	694	2,252
Miscellaneous	133	2,250	2,383
Juvenile immigrant department	276	—	276
Colonial vessel	827	—	827
Total expenses	7,692	10,194	17,886

Total expenditure of the troops in Western Australia, during 1848, for pay, allowances, pensions, supplies, exclusive of the salt meat and candles sent from England, and transport, £10,501; repairs to military buildings, lodging money, &c., £1,044 = £11,545; add Parliamentary grant for civil expenses, from military chest, £7,128 = 18,673.

Commerce is increasing, and the exports fast rising to a level with the imports. The details of trade in 1848 were—

ountries.	Imports from	Exports to	Shipping Inwards.
			Tons.
United Kingdom	£19,218	£12,965	1,416
British Colonies	24,922	15,612	4,888
Foreign	624	1,020	9,190
Total	£44,764	£29,597	15,494

Staple Products.—Wool, timber, oil, fish; to which will, probably, soon be added copper, lead, and other metals.

A *Geraldine Mining Company* has been established at Perth; capital £6,400, in 1,280 £5 shares. A silver-lead mine, in the Toodyay district, yields five ounces of silver to the ton of ore, roughly assayed.

Mother-o'-pearl shells, which are worth from £20 to £70 a ton, cover a district of Sharks' bay having six to twelve feet water; and pearls as large as peas have been recently collected there. An island covered with guano, equal to that of Peru, has been recently discovered in the same neighbourhood; where the raspberry (an *acacia*, so called from the odour of the timber), sandal, and red ebony woods have been found growing within 200 yards of the beach. The sandal wood of Western Australia is a lucrative article of export; some sent by the *Vixen* to Singapore, for the China market, sold for £21 per ton, leaving a net profit of £17 per ton. Her Majesty's dockyards are now contracting for the excellent ship timber of Western Australia, some of which (the *jarrah*) endures any time in water, and is not eaten by that destructive worm the *teredo navalis;* ships built with it require no coppering; a plank may be cut of any size; and there is enough of timber and knees, of the best kind, to supply the British navy for centuries.

A forest of the jarrah, or mahogany, at a distance of eighteen miles from Perth, and twenty from the sea, extends over a tract of at least 140 miles from north to south, with a known width of four miles from east to west. The trees are very fine; and it has been computed that this forest alone contains sufficient of this invaluable timber to build 17,920 line-of-battle ships, reckoning the largest amount of timber ever required for a ship as the average. Twenty navies equal to that of Great Britain might, therefore, be constructed from this single forest.

The jarrah, and indeed all the heavy timber of the colony, is included in the genus *eucalyptus;* but the species are very numerous: of these, that called the *tuart* ranks next to the jarrah in value, and is indeed, in some respects, superior to it, but is not nearly so abundant.

The *white gum* much resembles the tuart, and partakes in its remarkable quality of scarcely shrinking in the process of drying; but it is looked upon with an evil eye by the settlers, as indicating the predominance of ironstone and clay in the soil.

The *red gum*, one of the most common, but also the most beautiful, of its tribe, though of no great value as timber, being subject to dry rot, is easily worked, and much used in the colony for spokes of wheels and split fencing of all descriptions.

The *morrel*, chiefly found in the Toodyay district, is highly esteemed for its toughness and strength.

The *great blue gum* is found in perfection in the neighbourhood of Nornalup and the Deep river, between Augusta and King George's Sound, where it attains the extraordinary height of from 100 to 150 feet, and measures fifty feet in circumference.

There are, besides, the *black butt, salmon gum,* and many others.

The ornamental woods of the colony are numerous, and many of them very beautiful in grain and figure. The *sandal wood* has been before mentioned. The *raspberry,* or *jam wood,* which somewhat resembles rosewood in grain and colour, grows generally in the country within the range. The *casuarina,* or the oak, found mostly in the sandy districts near the coast, when well worked up, is a very pretty wood.

Besides these, there are several other kinds of ornamental woods, as the *banksia,* and various species of *dryandria,* one of which is called satin-wood by the colonial cabinetmakers.

Fisheries.—At present, only one vessel and about eighteen boats are employed. The Americans and French carry on extensive whaling pursuits in the very harbours of Western Australia, whose fisheries are among the finest in the southern hemisphere. The entire coast swarms with snapper, whiting, mullet, bream, kingfish, mackerel, &c., of the highest quality. The snapper weighs from 10 lbs. to 40 lbs.; and dried, sells for £16 per ton, at the Mauritius.

Banking and Monetary Affairs.—An excellent institution termed the *Western Australian Bank,* was established in June, 1841, with a subscribed capital of £20,000, in 2,000 £10 shares. The capital paid up is £5,544, by about 100 proprietors. The dividend paid for the last five years has averaged twelve and-a-half per cent. per annum. The paper circulation in July, 1849, was £2,652; the bills under discount, £10,360; and the deposits not bearing interest, £13,718. *Coin* of all descriptions in the colony, about £11,000.

Exchange.—Bills on her Majesty's Treasury, and on agents of Western Australian Bank, London, at par in 1848. Private bills on London, at thirty days' sight, five per cent. discount.

Prices of Produce in Western Australia in 1848:—Wheat, per bushel, 5*s.*; barley, 4*s.*; oats, 4*s.*; horses, £20; horned cattle, £6; sheep, mixed flock, 4*s.*; goats, milch, 5*s.*; swine, 10*s.* each; flour, per ton of 2,000 lbs., £16; wheaten bread, per lb. 2½*d.*; milk, 4*d.* per. quart; butter, 1*s.* 6*d.*; cheese, 1*s.* 2*d.*; beef, 5*d.*; mutton, 3½*d.*; pork, 8*d.*; rice, 2*d.*; coffee, 6*d.*; tea, 2*s.*; sugar, 3*s.*; salt, 1*d.* per lb.; wine, 4*s.* 6*d.*; brandy, 18*s.*; beer, 4*s.* per gal.; tobacco, 2*s.* 6*d.* per lb.

Wages for labour.—Domestics, £15 to 20; predial-shepherds, £36; farm servants, £24 per annum; trades, 6*s.* per diem.

It remains for me now only to notice two important features connected with the colony. I have already adverted to the advantages possessed by colonies which have public companies in England connected with their welfare. Western Australia, excepting in the short-lived instance of the *Australind Association,* has not hitherto had this collateral benefit. Earl Grey, however, with a view to the remedying of this defect, has sanctioned the formation, by act of parliament, of a *Colonization Assurance Company,* in London, whose operations for the promotion of colonization are to be directed to Western Australia. The corporation, under the provisions of the act of the imperial legislature (13 Vic. c. 24), has rightly ordained that the responsibility of its shareholders be *limited* to the amount for which they have severally subscribed. The capital authorised to be raised in the first instance, is £100,000 in £10 shares, with power of increase, subject to the consent of the Lords of her Majesty's Treasury. The corporation is authorised to purchase and to hold lands to any extent in the colonies and dependencies of the British Empire: any emigrants conveyed or caused to be conveyed to Western Australia by the company, shall entitle them to receive land scrip to the value of £20 for each emigrant, male or female, above fourteen years of age, or for every two emigrants under that age. The land-scrip is to be taken in payment of crown lands in Western Australia, at the rate of 20*s.* per acre; corporation may require the governor to put up crown lands, under certain provisoes. Accounts of corporation are to be annually reaudited by the registrar of joint-stock companies, and the annual report to be sent to the Board of Trade. The operations of the company are not to extend beyond Western Australia, except the consent of the local legislature of the colony in which it is proposed to commence operations, and that of her Majesty's Secretary of State for the Colonies, shall have been previously obtained. Taken altogether, the act is liberal, and may be beneficially worked for the interests of the shareholders of the company, and of the colonists. It is understood that the cor-

poration intend to purchase eligible sites in Western Australia, for the formation of settlements, and they propose to enable emigrants to lease lands from the corporation on the principles of Life Assurance; such lands, on the payment of a rent for a given period, or on the termination of the life of the leaseholder, to be the property of his heirs; thus the emigrant may be enabled to pay for his land, not out of capital, but out of profits to be realized from his own labours, aided by the fostering exertions of the corporation. Thus—A., aged 30, for an annual premium of £7 4*s.* 1*d.*, is put into immediate possession of 100 acres of good land, and whenever he dies—even if within the first year—the land becomes the property of his representatives, without further payment. There are also calculations for limited periods of assurance. The company propose to devote a portion of its funds to assist in providing for all its settlements, churches and clergy of the church of England; and it will afford liberal assistance to other classes of Christians, according to the circumstances of each case. I believe this useful association has been projected and carried into operation by R. W. Nash, Esq., late member of the Legislative Council in Western Australia, by whose unceasing exertions the colony has been materially benefitted.

Transportation.—Her majesty's government, in accordance with the strongly expressed desire of the colonists of Western Australia, have resolved to send out a moderate number of convicts to the colony, who will, at first, be entirely under the control of the government, and be employed in improving the harbours, opening roads, cutting valuable timber, or in such other public works as the government, in conjunction with a competent officer sent from England for the purpose, may consider most likely to develop the resources of Western Australia, and to remove some of the obstacles to the progress of the colony, by employing a competent force of labour upon undertakings to which private means have proved inadequate. The convicts to be selected for this useful purpose, will be those who from their conduct at their present places of detention, and from their having to undergo but a short period of imprisonment prior to becoming qualified for a greater degree of freedom, appear likely to behave in an industrious and orderly manner. When they are set free from the public works on account of good conduct, their services will become available to the settlers; but if they should misbehave, and be therefore returned upon the hands of government, they will again be placed on public works at the expense, as in the first instance, of the British Treasury. There is no intention of assigning convicts to settlers, or of introducing in any form the system of assignment. There will be no interference whatever with the free character of the colony; and should parliament, as it is hoped, continue to grant an annual sum for promoting free emigration to those colonies which receive convicts, her Majesty's government intend to send emigrants of good character, and of both sexes, equal in number to the convicts transported to Western Australia.

By intelligence from Perth, Western Australia, dated April, 1850, it appears that the active population of the colony are in favour of these propositions, but they rightly deem that their efforts for the promotion of moral and spiritual instruction must be redoubled and watched over with increased vigilance. The statements given at page 409 to 419 of this volume shew that transportation, under proper management, is the most Christian course which can be adopted for the reformation of the sinner, and for the preservation of the community to which he belongs, from the effects of a renewal of his crimes. The absence of all spiritual instruction, the indiscriminate assignment-system, the terrific punishments adopted without the slightest effort to correct the evil tendencies of the criminals, and the pouring into a colony thousands of convicts without due admixture of free men and women, caused the necessity for cessation of transportation to New South Wales. But in Western Australia her Majesty's government are adopting a sound system, by which the United Kingdom may be relieved annually from the pressure of an enormous prison population, the expenses on the British Treasury materially lessened, and a fine colony, blessed with a genial clime and fertile soil, but with only 5,000 inhabitants to 1,000,000 square miles of territory, may be rendered attractive to free settlers of all classes, and have its prospects increased of becoming the seat of a large and flourishing free population.*

Summary.—The limited number of pages to which each division of this work is neces-

* See Letter from Earl Grey to R. W. Nash, Esq., of 20th December, 1849.

sarily restricted, not only compels an abbreviation of different sections, but altogether precludes the discussion of several topics more or less connected with the four colonies whose description occupies the present volume.

The chief aim of this work being one of plain and practical utility, I have devoted the fullest assignable space to the details best calculated to illustrate *the progress, actual position, and resources* of these provinces, alluding only incidentally to the *flora* and *fauna* of this singular country, with which the splendid volumes of Gould and Angas, and the interesting delineations of Mitchell, Sturt, and other explorers, have already, to a considerable extent, familiarised the public mind.

But there remains another subject from which I turn with more reluctance, although the above-named authors have dwelt upon it at some length; and Eyre and Grey also have published the results of their investigation. I allude to the condition and character of the aborigines, whose preservation from extinction, and, if possible, conversion, deserves the most strenuous efforts on the part of a Christian nation, and is indeed the only compensation that can be made for the evils which the very presence of the white man, and the civilization, which has become a second nature to him, unavoidably brings to the savage. Viewing it in this aspect the subject is one of deep and painful interest; to me it also appears very important in an ethnological point of view; and when in Australia I exhumed the body of a female aborigine who was buried in the solitude of the forest with the customs peculiar to her race; and I obtained, after execution, the body of a native chief, brought to the scaffold for the murder of an English shepherd, at Bathurst, New South Wales; I measured their skeletons, bone by bone, and minutely investigated their physical configuration. Having, however, arrived at my last page, I am reluctantly compelled to close the volume with a hope that when the historical, geographical, and statistical delineation of the colonies is completed, I may, with the aid of that liberal support with which the public has thus far sustained my labours, be enabled to present in a single volume a full and illustrated description of the aboriginal or native subjects of the British crown in various parts of the world, viz., the natives of British North America, of British South America, of Australia, of New Zealand, of India, of Africa, and of the islands in the Pacific and eastern hemisphere.

In conclusion, I cannot, I believe, offer a better summary of the facts contained in the preceding pages, than is comprised in the following tabular view of the colonies planted by England in Australia:—

State of the Colonies on the island-continent of Australia, in 1850.

Particulars.	New South Wales.	Victoria.	South Australia.	Western Australia.	Total.
Date of formation, A.D.	1787	1836	1836	1829	—
Area in square miles, about	500,000	92,000	300,000	1,000,000	2,000,000
White population, about	200,000	50,000	50,000	5,000	305,000
Number of acres to each inhabitant	1,600	1,117	3,840	128,000	—
Acres of land in cultivation	130,000	40,000	50,000	8,000	228,000
LIVE STOCK:—					
Horses	100,000	17,000	6,000	3,000	126,000
Horned cattled	1,400,000	400,000	100,000	12,000	1,912,000
Sheep	7,000,000	5,200,000	1,200,000	150,000	13,550,000
Swine	70,000	6,000	1,500	2,500	80,500
MARITIME COMMERCE:—					
Value of imports in £	1,300,000	500,000	400,000	45,000	2,245,000
Value of exports in £	1,500,000	600,000	500,000	35,000	2,635,000
Shipping tonnage inwards	140,000	70,000	40,000	5,000	255,000
Local revenue in £	300,000	100,000	120,000	10,000	530,000
Civil cost to Great Britain in £	—	—	—	7,500	7,500
Military cost to Great Britain in £	70,000	—	16,000	11,000	97,000
Taxation per head, in shillings	30	40	48	40	—
Consumption of imports per head, in shillings	130	200	160	180	—
STAPLE EXPORTS:—					
Wool, in lbs.	16,000,000	14,000,000	3,000,000	400,000	33,400,000
Tallow or Oil, in cwts.	60,000	28,000	3,000	—	91,000
Metals, in £	25,000	—	350,000	—	375,000
Chief town	Sydney	Melbourne	Adelaide	Perth	—
Population of capital	50,000	15,000	15,000	1,500	—

Note.—In the £70,000 stated as military cost of New South Wales, Victoria province is included. In the return of metals exported as from New South Wales, Victoria is also included Round numbers are used

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